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INJURIES AND DAMAGES FROM HAZARDOUS WASTES—ANALYSIS AND IMPROVEMENT OF LEGAL REMEDIES

A REPORT TO CONGRESS IN COMPLIANCE WITH SECTION 301(e) OF THE COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (P.L. 96-510) BY THE "SUPERFUND SECTION 301(e) STUDY GROUP"

PART 1
THE REPORT AND COMMENTS

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July 1, 1982

Honorable George Bush, President
United States Senate
Washington, D.C. 20510

Honorable Thomas P. O'Neill, Jr., Speaker
House of Representatives
Washington, D.C. 20515

Dear Mr. President:
Dear Mr. Speaker:

The Superfund §301(e) Study Group, appointed pursuant to §301(e) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (P.L. 96-510) herewith submits its report pursuant to law.

The Report on Injuries and Damages for Hazardous Wastes--Analysis and Improvement of Legal Remedies consists of four parts.

Part I covers our authorization, selection and activities.

Part II deals with the factual background of the hazardous waste problem and its complexity. It draws on government sources, available scientific literature, and on other available data. It documents the existence of the problem as well as the incomplete state of knowledge -- not only for the Study Group, but of government and of the scientific community.

Part IIIA carries out the instructions of CERCLA §301(e) to study and analyze available causes of action for the recovery for personal injuries, and property and environmental damage resulting from exposure to hazardous wastes. It seeks to examine the adequacy of available remedies as well as existing barriers to recovery. Part IIIA is the legal analysis of the problem of recovery for the consequences of exposure to hazardous wastes. It concludes that there are identifiable barriers to recovery, and that available remedies may not be adequate to deal with many valid claims that may emerge. Part IIIB deals with insurance coverage for hazardous waste liabilities. The recommendations in Park IV are designed to deal with the problems defined in Part IIIA.

Part IV contains the Study Group's ten Recommendations. The first eight recommendations deal with a newly proposed no-fault compensation remedy ("Tier One"). The Ninth Recommendation deals with proposals for changes in state law for existing plenary actions ("Tier Two"). The Tenth Recommendation deals with property and environmental damage, and largely parallels the Ninth Recommendation. Each "Recommendation" is followed by a "Discussion" which seeks to explain the purpose of the recommendation, how the Study Group arrived at it, and what other points of view were expressed.

The last part of the Report consists of revised and updated research reports on specific legal topics dealt with by the Study Group. These are added as Appendices.

Respectfully yours,

James R. Zazzali, Chairman
Frank P. Grad, Reporter
Frederick R. Anderson
Frederick M. Baron
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Members of the Study Group

Reporter's Introduction and Acknowledgements

The Report of the §301(e) Study Group represents a year's work by an exceptional group of lawyers, selected for service by the leaders of the respective organizations designated in §301(e) of CERCLA, the Superfund legislation. The Report speaks for itself, of course, but the Reporter, who has carried a dual obligation both as a member of the Study Group and as its chief researcher, wishes to take this opportunity to make a few introductory comments on the work just completed.

The Report reflects many compromises, and its preparation was fraught with many difficulties. Some of the difficulties were inherent in the nature of the Study Group's task. The massive problems presented by hazardous substances and hazardous wastes are quite novel and might even be regarded as unprecedented in their magnitude and complexity. The Congress authorized the Study and called for this Report precisely because the problem is a newly emerging one--involving some novel and serious injuries with extended latency periods--for which existing law offers few ready answers. Another difficulty in the Study Group's work was the very composition of the Group itself. The law which authorized the Group expressly and intentionally provided for a membership derived from different organizations, representing different commitments and interests, and unlikely to reach an easy consensus. This Report was not arrived at easily. Indeed, most of the Recommendations consist of language which was the subject of lengthy debate and negotiation. It is gratifying to note that the Study Group managed to agree on most major recommendations, though it must be added that no member of the Group--including the Reporter--agrees with everything contained in it. The Report reflects the agreements reached, the debates necessary to reach them, as well as summaries of dissenting views and reference to some few issues that could not be resolved.

It is the Reporter's hope that the review of existing law will prove to be a reliable source and that the account of the Study Group's sometimes difficult deliberations--generally contained in the "Discussion" following each of the ten Recommendations will prove as useful a source of ideas and policy alternatives as the Recommendations themselves. The Reporter, like most members of the Study Group, does not view this Report as the final word on the subject. Problems of regulating hazardous substances and hazardous wastes are likely to be with us for a long time. Legal and technical solutions, too, will take time to develop, to take account of the experience gathered in their initial application. Law reform and the development of sound legislation has always been a continuing development, and the Reporter views this Report as a significant step in an incremental process.

The preparation of the Report and the Study Group's work was sometimes difficult but always challenging and intellectually stimulating. The Study Group consisted of an unusually accomplished and gifted group of lawyers--three chief state law officers, each a state attorney general in his home jurisdiction; three academics, law professors from distinguished law schools; and six eminent law practitioners, one of them a most distinguished chief judge, three of them well-known plaintiffs' attorneys, one with major trial experience on defendants' as well [illegible] plaintiffs' side, and one a senior member of a major law firm with longstanding involvement in major litigation and public affairs. It was a unique group each of whose members had the background and experience to make major contributions. By the same token, it was a group of strong individuals with deep insights and firm views. As Reporter, I wish to pay tribute to the quality, courtesy and civility of the members of the Group, because all of these attributes were essential in putting together a Report on which a considerable measure of agreement was reached.

The Reporter wishes to thank J. Vance Hughes and W. Lawrence Wallace, Chief and Assistant Chief, respectively, Policy, Legislation and Special Litigation Section, Department of Justice, Land and Natural Resources Division, essential not only to the smooth running of the study, but also for their contribution of research sources, and their insightful comments, proferred unobtrusively and reticently, all which helped to advance the work. Marty Kaplan, on the staff of the Department of Justice's Policy Legislation and Special Litigation Section cheerfully and splendidly performed the task of taking and reproducing the lengthy and complex minutes of the Study Group's deliberations, in record time for the Reporter's and the Group's use.

The staff of the individual members also contributed significantly to the Study, serving as available resource persons for their own chiefs and for the Group as a whole. They were Alfred Light, Esq. and Karen Donegan of the staff of George C. Freeman, Jr., Esq.; Eldon Kaul, Esq. and Lee Paddock, Esq. of the staff of State Attorney General Warren R. Spannaus, and Edward Steir, Esq. of the staff of Attorney General James R. Zazzali.

Last, but not least, I wish to thank my own associates, the Research Staff of the Legislative Drafting Research Fund of Columbia University whose names appear on this Report, and particularly my colleague Patricia Porter. My particular thanks must go to Camille E. Boxhill, who was in charge of production, and who saw the Report through its many changes--and many monthly deadlines.

Frank P. Grad
Reporter

LETTER OF TRANSMITTAL

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C. Statement of Frederick R. Anderson.

D. Comments of Charles D. Breitel, Study Group Member.

E. Comments of George Clemon Freeman, Jr.

F. Final Comments by Weyman I. Lundquist, Study Group Member.

G. Comments by Jeffrey O'Connell, Study Group Member.

H. Comments of Warren Spannaus.

I. ESTABLISHMENT OF CERCLA §301(e) STUDY GROUP; SCOPE OF WORK; ACTIVITIES

The Study Group was established pursuant to §301(e) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, (CERCLA), Pub. L. No. 96-510, 94 Stat. 2767, 42 U.S.C. §9601 *et seq.*, the Superfund legislation. Congress, having rejected remedies for personal injuries and property damage contained in earlier bills, created the Study Group and gave it the following charter:

> (e)(1) In order to determine the adequacy of existing common law and statutory remedies in providing legal redress for harm to man and the environment caused by the release of hazardous substances into the environment, there shall be submitted to the Congress a study within twelve months of enactment of this Act.
>
> (2) This study shall be conducted with the assistance of the American Bar Association, the American Law Institute, the Association of American Trial Lawyers, and the National Association of State Attorneys General with the president of each entity selecting three members from each organization to conduct the study. The study chairman and one reporter shall be elected from among the twelve members of the study group.
>
> (3) As part of their review of the adequacy of existing common law and statutory remedies, the study group shall evaluate the following:
>
> (A) the nature, adequacy, and availability of existing remedies under present law in compensating for harm to man from the release of hazardous substances;
>
> (B) the nature of barriers to recovery (particularly with respect to burdens of going forward and of proof and relevancy) and the role such barriers play in the legal system;

(C) the scope of the evidentiary burdens placed on the plaintiff in proving harm from the release of hazardous substances, particularly in light of the scientific uncertainty over causation with respect to --

(i) carcinogens, mutagens, and teratogens, and

(ii) the human health effects of exposure to low doses of hazardous substances over long periods of time;

(D) the nature and adequacy of existing remedies under present law in providing compensation for damages to natural resources from the release of hazardous substances;

(E) the scope of liability under existing law and the consequences, particularly with respect to obtaining insurance, of any changes in such liability;

(F) barriers to recovery posed by existing statutes of limitations.

(4) The report shall be submitted to the Congress with appropriate recommendations. Such recommendations shall explicitly address--

(A) the need for revisions in existing statutory or common law, and

(B) whether such revisions should take the form of federal statutes or the development of a model code which is recommended for adoption by the states.

Section 301(e) also provides that the Study Group consist of twelve (12) members, with three members to be designated by the American Bar Association, three by the American Trial Lawyers Association, three by the Association of State Attorneys General, and three by the American Law Institute. The members of the Group were designated in June of 1981, as follows:

By the American Bar Association:

Professor Frederick R. Anderson, George C. Freeman, Jr., Esq., Weyman I. Lundquist, Esq.

By the American Law Institute:
The Honorable Charles D. Breitel, Professor Roger C. Crampton, who resigned in October 1981 and was replaced by Professor Jeffrey O'Connell, Professor Frank P. Grad.

By the American Trial Lawyers Association:
Frederick M. Baron, Esq., Richard F. Gerry, Esq., Norman J. Landau, Esq.

By the Association of State Attorneys General:
The Honorable Rufus L. Edmisten, The Honorable Warren R. Spannaus, The Honorable James R. Zazzali.

The Study Group's first meeting took place in Washington, D.C., at the offices of the Department of Justice. The Honorable Carol E. Dinkins, Assistant Attorney General, presided over the organizational meeting at which the Hon. James R. Zazzali, Attorney General of the state of New Jersey, was elected chairman, and Professor Frank P. Grad was elected reporter. The first meeting was devoted to a brief discussion of the scope of the research to be undertaken by the Study Group. The Reporter was also authorized to engage the Legislative Drafting Research Fund of Columbia University to provide background research services. (Professor Grad is the Director of the Legislative Drafting Research Fund).

The Study Group held meetings on June 8, 1981 in Washington, D.C.; July 10, 1981 in New York; September 11-12, 1981 in Chicago, Ill.; October 15, 1981 in Philadelphia, Pa.; November 13-14, 1981 in Washington, D.C.; December 17-18, 1981 in San Diego, Calif.; February 4-5, 1982 in New York, N.Y.; April 15-16, 1982 in Washington, D.C.; May 19-20, 1982 in Philadelphia, Pa.; June 28-29 in Boston, Mass.

The scope of research of the Study Group is well defined in §301(e) of CERCLA and the Study Group's activities sought to carry out its specific mandate.

Beginning with its meeting in August 1981, the Study Group discussed a variety of legal subjects and issues relating to available common law and statutory remedies for injuries and property loss resulting from exposure to hazardous waste, and particularly from exposure to hazardous waste sites. In addition, the Study Group, in accordance with its charge, considered new remedial approaches to deal with situations and cases where no effective remedies currently exist, or where existing remedies appear to be inadequate to deal with the situation. The Study Group also considered measures to recognize and overcome existing barriers to recovery.

The Study Group's discussion and consideration of issues was aided by legal memoranda prepared by the Reporter with the assistance of staff members of the Legislative Drafting Research Fund. Individual members of the Study Group also contributed literature, sources and written materials for discussion, and on some occasions, at the request of the Study Group, data and analytical papers were also supplied by the Land and Natural Resources Division of the Department of Justice. J. Vance Hughes, Esq. and W. Lawrence Wallace, Esq., Chief and Assistant Chief, respectively, of that Division's Policy, Legislation and Special Litigation Section, acted as the Department's liaison with the Study Group and were most effective in supplying useful background materials from time to time. At the inception of the study, they supplied a full set of Congressional documents on the legislative history of the Superfund legislation, a list of selected bibliographic references and references to legal journals, on hazardous waste law and litigation.

Agenda for each Study Group meeting were prepared in advance in order to focus discussion on designated policy issues. A detailed set of minutes for each meeting was prepared to provide a record of the policy decisions made, and to serve as a basis for the future resolution of the policy issues. Ms. Marty Kaplan of the Department of Justice's Policy Legislation and Special Litigation Section acted as secretary and kept the Study Group's minutes.

The Study Group agreed, not only to try its best to resolve significant policy differences among members, but also to reflect in its Report the policy alternatives considered and the issues examined, whether resolved or unresolved.

II. DIMENSION AND COMPLEXITY OF THE HAZARDOUS WASTE PROBLEM

The discussion of legal issues relating to injuries from hazardous wastes must proceed in a setting of factual and scientific uncertainty because, at this time, in mid-1982, it is impossible to determine the number of persons who have been injured or who could be injured by exposure to such sites.[1]

Despite this uncertainty, there is justified concern over health consequences of hazardous waste disposal because what is certain is the vast amounts of industrial waste produced,[2] that a significant portion of this waste is hazardous,[3] and that in the past, much of this hazardous waste was disposed of in an improper manner.[4] Moreover, experience has shown that the process of locating, evaluating, and eliminating known dumpsites sometimes leads not only to the discovery of greater hazards than expected, but also to additional personal exposure.[5]

Estimates of the number of sites that contain hazardous wastes range from a low of 4,802, the result of an industry-sponsored study,[6] to a high of 50,000 sites, the higher figure in a 30- 50,000 estimate which resulted from a government-sponsored study, widely used in the Congressional committee reports prepared in connection with the Superfund legislation.[7]

The same studies also provide widely different estimates of the number of sites that may cause a serious danger to health, with government-sponsored studies giving an estimate of 2,000 such sites,[8] and industry-sponsored studies finding 431 health-endangering sites.[9]

The wide discrepancy in these numbers subjects the estimates to serious doubts--which are strengthened by examining the methodologies used to calculate the number of sites. The higher set of numbers is taken from a study done for EPA by Fred C. Hart Associates.[10] This study apparently was based on reports from EPA regional offices, some of which simply reported that all landfills may contain hazardous waste while others omitted sites that could pose serious risks.[11] The study was completed under time pressure and the final numbers were, apparently, extrapolated from only 232 sites (only 24 of which were actually visited) using information on the amount of hazardous waste produced annually in the nation.[12]

The lower set of numbers was produced by the Chemical Manufacturer's Association (CMA). A phone survey of state environmental agencies conducted by CMA provided the basis for these estimates. However, it is uncertain whether these numbers are from final data or from a preliminary survey,[13] and there is no indication of how the state agencies involved determined the numbers they reported to the CMA.[14]

The Superfund law, CERCLA §105 requires the President to include methods for the discovery, investigation and evaluation of hazardous waste sites in the revision of the National Contingency Plan within 180 days of its enactment. That deadline was not met and it is unlikely that an accurate count evaluation of the health effects of hazardous waste sites will be accomplished within the next few years because of a number of inherent scientific problems.[15] Although CERCLA defines hazardous wastes very broadly for purposes of regulating permissible and prohibited discharges, and is therefore useful in counting hazardous waste sites generally, it is overbroad for the purpose of determining which sites create special risks to public health. The problem of determining toxicity -- and for what purpose -- has become a recurring issue for regulators. It has been noted that "virtually all substances become toxic at sufficiently high levels."[16] Both animal tests--usually exposing animals to high levels of suggested toxic substances and then extrapolating the results -- and studies of humans that have suffered exposure to the substances -- are used to develop statistical evidence.[17] One of the problems of using such data is the long period of latency that is often present -- i.e., adverse health effects with many toxic substances may not appear for 15 to 20 years or even longer after exposure. If the person has been exposed to other toxic substances during the latency period, it may be very difficult to establish a causal link between the adverse helath effects and any one particular substance.[18] The problem is further complicated by the fact that sometimes different kinds of wastes at one site may react synergistically and create a compound more toxic than any of the substances on their own. A variety of other problems may also be encountered in an effort to use epidemiological data to relate illness to a particular disposal sites. If only a few persons were exposed to a particular site, the evidence may be statistically inconclusive, even though the cancer rate, or the rate of teratogenicity may be higher than in surrounding areas or for the population at large.[19]

It has been noted that the definition of "hazardous waste" or "hazardous substance" can be different for different purposes. What constitutes a hazard in the context of litigation to compensate a person who has suffered injury by exposure to a substance may be different from the evaluation of a hazard in the regulatory setting.[20] For regulatory purposes, depending on the authorizing statute involved, the regulator may have to determine the risk in the light of the counterbalancing economic benefit resulting from the manufacture and use of the hazardous substance, before and after it becomes hazardous waste.[21]

In dealing with these issues, the Surgeon General's report on the potential health effect of toxic chemical dumps suggests that it may be more important, in a regulatory context, to define hazardous waste dump sites rather than hazardous wastes.[22] Such a definition of hazardous waste dump sites would consider not only the contents of the site, but also the likelihood of the escape of such contents from this site and injury to humans and the environment.

The quantification of risks to human life and health depends on the determination of the number of sites and the risks they pose. Three steps are necessary to quantify the problem. First, dump sites must be located. Second, a determination must be made of the contents of the particular site. Finally, the waste site and surrounding area must be examined to determine if wastes can escape from the site and would result in human exposure and injury.[23]

Locating dump sites is the first step in determining the magnitude of the hazardous waste problem. Despite recent concern over hazardous wastes, however, these sites are still difficult to locate. Many sites have long been abandoned and there are few records dating back to the time of abandonment. These problems were illustrated in a survey done by the Subcommittee on Oversight and Investigations of the House Committee on Interstate and Foreign Commerce .[24] After surveying the waste disposal practices of the 53 largest chemical companies, the Subcommittee found that, on the average, most company records of waste disposal only went back as far as 1968.

To achieve its goal of obtaining data back to 1950, the Subcommittee had to rely on employee recollection.[25] As a result of such inadequate records, some dumps may only be discovered by accident, unearthed by developers or others seeking to use the land which covers the dump site.[26] Some dumps may never be discovered.[27]

Once a site is located, an analysis must be done to determine what the site contains. Problems arise, first in sampling material from dump sites and then in analyzing the sample to determine its chemical composition.

The sampling problem exists mainly because only a small, finite number of samples can be taken. The sampling process may pose a risk in and of itself because it causes the release of materials from the site. As a result, current practice is to collect no more than ten samples from any site.[28] This necessarily limits the ability to determine exactly what any site contains. Further limits may be imposed by the nature of the site. As a study committee from the Department of Health, Education and Welfare noted:

> Toxic chemicals may be purposely put in drums. However, there are no sampling methods for contents of drums or materials in soil or water or other contaminated media that will accurately reflect the contents of unsampled areas or portions of the sample.[29]

This means that even if many samples are taken, all of which fail to yield hazardous substances, there is no assurance that the particular site presents no dangers.

Once samples are taken, the next problem is an analysis of the sample. Here again, limits exist on the ability to fully determine what chemicals are in the site. The method used typically, mass spectroscopy, does not yield useful results for many chemicals. Also, even if useful spectra are produced, they may not match any of those catalogued since waste may consist of byproduct chemicals or chemicals that have undergone changes after being dumped.[30]

Assuming that a site has been located and the substances in it analyzed and found to be potentially toxic, the next step is to determine whether individuals are or could be exposed to material escaping from the dump causing injury to those so exposed. Several methods of exposure must be considered, including "direct contact, fire and explosion, groundwater contamination via leachate, surface water contamination via runoff or overflow, air pollution via open burning, evaporation and wind erosion and poison via the food chain."[31] There are significant problems in associating particular kinds of exposure with particular known diseases.

Uncertainties in the count and designation of hazardous waste sites are apparently unavoidable at this time. When, in October 1981, EPA finally issued its list of 115 hazardous waste sites, asserted to represent the most serious potential danger to human health,[32] the Congressional Office of Technology Assessment criticized the list, on the grounds that EPA had used inappropriate criteria in establishing priorities.[33] These sites were to be the first ones to be cleaned up with Superfund money. The criticism should not have come as a surprise because the law requires that at least one disposal site be designated by each each state, thus inevitably skewing the "most hazardous" designation. Although there seems to be general agreement among knowledgeable scientists that there are great potential risks connected with hazardous waste disposal, there is no firm agreement about the manner in which the potential hazard of chemicals at a dump site, the risk of exposure and the potential health effects from such exposure is to be determined.[34]

Other problems must also be resolved. It is difficult to generalize about disposal sites, because disposal sites differ substantially in character from "classic dumps, with piles of unrecorded corroding drums"[35] to "carefully constructed, lined, covered, fenced in, and monitored basins,"[36] with every variety of type of disposal in between.

The most common mode of human exposure to waste chemicals is through groundwater. More than 40 million people depend on untreated well water,[37] and the impact of hazardous wastes on some of these water supplies is a matter of great concern. In compiling the list of the 115 most hazardous dump sites for EPA, the MITRE Corporation used proximity to water supplies that serve large numbers of people as one of the primary criteria.[38] Not all of the underground water contamination comes from dump sites. Many household products, pesticides, fertilizers, industrial solvents used in garages and print shops and dry cleaning facilities find their way into the water supply.[39] These other chemical pollutants may affect--or mask--the characteristics of chemicals that escape from dump sites.

There are major problems with the determination of the path followed by pollutants in underground water supplies and the determination and prediction of the movement of an underground plume is not always reliable. "There is no consensus on drilling methods, sampling frequency or protocol, standard quality assurance procedures, or the number of wells needed to define problems." There is also a risk that drillers unfamiliar with the required techniques will "run ~~the risk~~ of contaminating clean aquifers while drilling into polluted ores."[40]

Other difficulties are encountered--such as Love Canal--where exposure came from volatile chemicals in the air and physical contact with contaminated soil. Such a site raises the problem of where and what to monitor.

To compound the problem of uncertainty, it seems that quality control at many private and government laboratories is poor and test results have often been shown to be inaccurate.[41]

There are special problems, too, in monitoring human populations for exposure to hazardous chemical wastes because it is difficult to establish base line concentrations of chemical substances which in many populations are already quite high.

With all of these problems of measurement and quantification, it is nonetheless clear that there is no question that chemical wastes can be dangerous. The Office of Technology Assessment (OTA)- EPA dispute on the 115 worst waste dumps revolves around the extent of the danger and how to measure it. OTA says that EPA's listing does not give sufficient weight to the degree of toxicity of chemicals in a disposal site, but rather gives the greatest weight to the number of people close to the dump or waste disposal site who are at risk of exposure.[42] OTA asserts that "a dump which exposes a small number of people to an exceptionally hazardous compound is more dangerous than one that exposes large numbers to more innocuous chemicals."[43] OTA argued in favor of a "well-designed degree of hazard classification system"[44] to provide a more cost effective way to manage industrial wastes. EPA questions the feasibility of degree of hazard classifications.[45] It should be noted, however, that neither EPA nor OTA minimizes the risk of serious exposure.

To provide some additional background data on the dimension and character of the hazardous waste problem, a variety of government and literature sources have been drawn on to prepare the annexed table on hazardous waste incidents, sources and hazards. Note that many of the hazardous waste exposures combine long latency periods with serious risks of carcinogenicity, mutagenicity, teratogenicity, and other physical harm, including neurological damage.[See Appendix J].

An effort has been made to obtain some data or even estimates on the number of persons exposed and at risk of serious injury or disease. Although numerous sources were consulted,[46] little data could be obtained. The government sources and scientific sources seem to agree that it will be impossible to produce an accurate estimate of the number of hazardous waste injuries likely to emerge until more accurate information is gathered about the scope of the hazardous waste problem in general, and until scientific advances produce better information about the relationship between exposure and injury.[47] The scientific problem of estimating the number of victims is so great because the uncertainties multiply at each step of the process of determining the number of persons exposed and the causal link between exposure and injury. The difficulty here is much greater than with exposure to substances like asbestos where there are reasonably accurate records of the number of individuals exposed and knowledge of the causal connection between exposure and an identifiable disease.[48] It is questionable, therefore, whether the EPA estimate of 1.2 million Americans currently exposed to health hazards from hazardous dump sites.[49] provides any basis for the estimation of latent injuries and future claims.

Experience with occupational exposures to hazardous chemicals, and with such substances as Asbestos, Agent Orange, Kepone, PCB, PBB, Coal dust, and DES indicates a substantial possibility of large numbers of latent injuries and future claims. Despite the lack of significant third party damage awards in the past, a growing number of court suits are being filed and some request very high damages. EPA has reported, "If any of these suits are successful the potential third party damage costs associated with operating hazardous waste facilities would become much larger than currently available data shows."[50] Congress enacted CERCLA on the basis of incomplete information on current and future hazards. In order to protect against substantial, though uncertain risks of injury from hazardous waste exposure, policy makers, as in other fields of environmental regulation, will need to make decisions on an assessment of risks that are largely unquantified.[51]

PART II--NOTES

1. Many commentators in this field have grappled with the problem of providing a compensation remedy. in light of the great uncertainties in this field. *See, e.g.*, Ginsberg and Weiss, *Common Law Liability for Toxic Torts: A Phantom Remedy*, 9 HOFSTRA L. J. 659 (1981); Bauer, *Love Canal: Common Law Approaches to a Modern Tragedy*, 11 ENVT'L L. 133 (1980); Milhollin, *Long Term Liability for Environmental Harm*, 41 PITT L. REV. 1 (1979); Pfennigstorf, *Environment, Dangers and Compensation*, 1979 A.B.F. RESEARCH J. 349.

2. For example, an estimated 56 million metric tons of hazardous waste was generated nationwide in 1980. CEQ, ENVIRONMENTAL QUALITY 1980 at p. 218.

3. *See* Tables 5-5 ("Total U.S. Industrial Hazardous Wastes) and 5-6 (Common Industrial Wastes), *id*. at p. 217.

4. According to EPA, 90% of all wastes are disposed of improperly -- in unsecured landfills, by improper incineration or by midnight dumping. *Id*. at p. 218.

5. As a single example, note that one EPA investigator was injured when examining the dumpsite implicated in U.S. v. Midwest Solvent Recovery, Inc., 484 F. Supp. 138 (N.D. Ind. 1980). *See* GRAD, TREATISE ON ENVIRONMENTAL LAW, §402 at 4-124 (Supp. 1981). The popular concern over the consequences of exposure to hazardous wastes has also resulted in overreaction. The "ghost dump" of Frayser, Tennessee, is one example, where a highly charged atmosphere resulted in emotional meetings, Congressional hearings and talk of evacuating the area, even though no actual dump site existed. *See The Dump that Wasn't There*, 215 SCIENCE 645 (Feb. 5, 1982). There is an ongoing dispute, too, over the Love Canal scare, frequently referred to during the passage of CERCLA, and the quality of the May 1980 study of alleged chromosome defects among the residents of houses near the site. *See* Havender, *Assessing and Controlling Risk*, in Bardach and Kagen, SOCIAL REGULATION: STRATEGIES FOR REFORM 21, 47 (1982); Levine, LOVE CANAL: SCIENCE, POLITICS AND PEOPLE (1982); *Psycho-Social Impact of Toxic Waste Dumps*, 127 Cong. Rec. E 5894 (Dec. 16, 1981) (Cong. LaFalce); Kolata, *Love Canal: False Alarm Caused by Botched Study*, 208 SCIENCE 1239 (June 13, 1980); Holden, *Love Canal Residents Under Stress*, 208 SCIENCE 1242 (June 13, 1980).

6. *See* 10 ENVIR. REP. 2159 (1980).

7. *See* Preliminary assessment of clean-up Costs for National Hazardous Waste Problems (Fred C. Hart Assoc., E.P.A. Contract No. 68-01-5063, 1979). The report has been cited in H.R. Rep. No. 1016(I), 96th Cong., 2d Sess.(1980) at p. 18 and by the Subcommittee on Oversight of Governmental Affairs, 96th Cong., 2d Sess., Report on Hazardous Waste Management and Implementation of the Resource Conservation and Recovery Act I (Comm. Print 1980).

8. *Id*.

9. *See* 10 ENVIR. REP. 2159 (1980).

10. *See* note 7, *supra*.

11. *See* Fischer, *The Toxic Waste Dump Problem and a Suggested Insurance Program*, 8 B.C. ENVT'L AFF. L. REV. 421. 424 (1980) (hereinafter cited as Fischer).

12. Hazardous Waste Disposal: Hearings Before the Subcomm. on Oversight and Investigation, House Comm. on Interstate and Foreign Commerce, 96th Cong., 1st Sess., 1289-90 (1979) (Statement of Henry Eschwege, General Accounting Office).

13. In the Environmental Reporter, it seems fairly clear that these numbers are preliminarily based on full or even partial reports from only 33 states. 10 ENVIR. REP. 2152 (1980). However, in H.R. Rep. No. 1016(I), Congressmen Stockman and Loeffler seem to treat them as final figures and argue that they show that there is no chance of a "latent public health and environmental catastrophe" caused by release of hazardous waste. H.R. Rep. No. 1016(1) at p. 70 (96th Cong., 2d Sess. 1980) (dissenting views of Congressmen Stockman and Loeffler).

14. *See* 10 ENVT'L REP. 2152 (1982).

15. The National Contingency Plan was proposed finally on March 12, 1982. 47 Fed. Reg. 10972 (to be codified at 40 C.F.R. Part 300). The Environmental Protection Agency's MITRE model is one step toward development of a means for assessing the risks associated with individual waste sites. The National Academy of Sciences and the National Research Council have begun a joint study to assess the percentage of chemicals to which "man and his environment" may be exposed as another "first step" toward assessment of health risks. 47 Fed. Reg. 11321 (Mar. 16, 1982); the Administrative Conference of the United States has drafted proposed recommendations providing for interagency coordination, advisory panels, generic rulemakings and regulatory negotiation procedures as mechanisms for assessing the health risks of cancer-causing chemicals. 47 Fed. Reg. 11024 (Mar. 15, 1982).

16. Senkan and Stauffer, *What to Do With Hazardous Waste*, TECHNOLOGY REVIEW, Nov/Dec 1981, 34, at 40.

17. Office of Technology Assessment, CANCER TESTING TECHNOLOGY AND SACCHARIN, at 11-15 (1977).

18. Senkan and Stauffer, *supra* note 16, at 40. Actually, epidemiological studies may be the only way to accurately determine the adverse health effects caused by a particular dump site. Although a particular substance may not be toxic on its own, it may become so in the presence of other substances found in a particular site. Thus, epidemiological studies can show that a particular site poses a risk, even when an assessment of the substances in the site establish that no known substances are located in the site. It will be important to develop proper

epidemiological methods to apply particularly to the hazardous waste problem. *See*, Department of Health, Education and Welfare, Report on the Potential Health Effects of Toxic Chemical Dumps, *reprinted in* Sen. Comm. on Environment and Public Works, Health Effects of Toxic Pollution: A Report from the Surgeon General and a Brief Review of Selected Environmental Contamination Incidents with a Potential for Health Effects, 96th Cong., 2d Sess. (Comm. Print 1980) at 28-35 (hereinafter cited as Surgeon General's Report).

19. *Id.* at 30. Many scenarios are possible. One that may be all too common is suggested in the study of the Walnut Hill neighborhood in Woburn, Massachusetts. There cancer statistics for a 10 year period show that the cancer rate was 13 percent higher than it should have been statistically. Woburn is also the location of an industrial waste dump which was not discovered until someone bought the land and began to excavate, attempting to develop it. Some of the wastes in the dump date back 100 years. Langer, *Hazardous Wastes: Ghosts of a Prodical Past*, TECHNOLOGY REVIEW Aug/Sept 1980 at 10. Thus, statistical evidence of abnormal cancer rates may itself be an indication that a hazardous waste dump is close at hand. The so-called "ghost dump" at Frayser, Tennessee, reflects popular fears and the perils of relying on residents reporting on residents' reporting of an increased incidence of health effects. *The Dump That Wasn't There*, 215 SCIENCE 645 (Feb. 5, 1982).

20. As Selin M. Senkan and Nancy W. Stauffer noted, "[t]he best regulations would protect human health and the environment while imposing the minimum economic hardship on industry and thus our national economy." Senkan and Stauffer, *supra* note 16 at 40. As such selecting chemicals to regulate by labelling them hazardous involves a delicate balance between many factors. Id. See also, Jellinek, *On the Inevitability of Being Wrong*, TECHNOLOGY REVIEW, Aug/Sept 1980,at 8. In that piece, a former EPA administrator indicating that scientific uncertainty about the effects of certain substances on the environment often forces regulators who need certainty into the position of making the wrong decisions.

21. *See, e.g.*, Portney, *Toxic Substance Policy and the Protection of Human Health*, in Portney, ed. CURRENT ISSUES IN U.S. ENVIRONMENTAL POLICY 105 (Resources for the Future, 1978); Note, *Risk-Benefit Analysis and Technology Forcing Under the Toxic Substances Control Act*, 62 IA. L. REV. 942 (1977).

22. *See*, Surgeon General's Report, *supra* note 18, at 19-21.

23. *Id.* In reality, estimates of the number of humans who will be injured by exposure and manifest that injury will only be done in the roughest terms. Cancer is likely to be one of the potential effects of exposure that causes great public concern, yet the causes of cancer are quite complex, and it will be difficult for scientists to predict that a certain number of individuals from an exposed group will develop cancer because they were exposed until statistics are developed for the particular type of exposure. *See* Reif, *The Causes of Cancer*, 69 AMERICAN SCIENTIST 437 (1981); MacMahon, *In Pursuit of the Public Health*, TECHNOLOGY REVIEW, Nov/Dec 1981 at 51.

24. Subcomm. on Oversight and Investigation, House Comm. on Interstate and Foreign Commerce, Waste Disposal Site Survey, 96th Cong., 1st Sess. (Comm. Print, 1979).

25. *Id.* at xiii.

26. Langer, *supra* note 19, at 10.

27. As the Department of Health, Education and Welfare noted, one problem that is not completely solvable is that "there may never be certainty that all hazardous waste dumps have been identified regardless of approach." Department of Health, Education and Welfare, *supra* note 18, *reprinted in* Surgeon General's Report *supra* note 18, at 26.

28. *Id.* at 24.

29. *Id.* at 27.

30. *Id.* at 45-50. Of course identifying the chemicals or substances in the site is not the same as showing that the substances are toxic. Often, as was the case at Love Canal, little will be known about the effects of exposure to these chemicals nor about the effects of exposure to the groups of chemicals contained in a particular site, Love Canal: Health Studies and Relocation, Joint Hearings Before the Subcomm. on Oversight and Investigation of the House Comm. on Interstate and Foreign Commerce and the Subcomm. on Environment, Energy and Natural Resources of the House Comm. on Government Operations, 96th Cong., 2d Sess. 43 (1980) (statement of Dr. David Roll, director of the National Institute of Environmental Health Sciences) (hereinafter cited as Love Canal Hearings).

31. Hazardous Waste Fact Sheet, EPA Journal, Feb. 1979 at 12.

32. U.S. E.P.A., *Environmental News*, October 23, 1981.

33. Maugh, *Just How Hazardous Are Dumps?*, 215 SCIENCE 490 (Jan. 29, 1982).

34. *See Epidemiologists See Need for New Tools to Study Toxic Effects from Waste Dumps,* 5 CHEM. REG. REP. (BNA) 887 (Nov. 6, 1981); *Just How Hazardous Are Dumps?, supra* note 33; Maugh, *Biological Markers for Chemical Exposure,* 215 SCIENCE 643 (Feb. 5 1982).

35. Maugh, *supra* note 33, at 491.

36. *Id.*

37. *Id.*

38. *Id.*

39. *See* C.E.Q., ENVIRONMENTAL QUALITY 1980 at pp. 83-100.

40. *See* Ginsberg and Weiss, *supra* note 1.

41. Maugh, *supra* note 33, at 491.

42. *Id.*

43. *Id.* at 493.

44. *Id.*

45. *Id.*

46. Love Canal: Health Studies and Relocating, Joint Hearings before the Subcomm. on Oversight and Investigation of the House Comm. on Interstate and Foreign Commerce and the Subcomm. on Environment, Energy and Natural Resources of the House Comm. on Government Operations, 96th Cong., 2d Sess. (1980); Senate Comm. on Government Affairs, Hazardous Waste Management Report (Comm. Print, 1980); Long Term Risks of Hazardous Waste Sites, Post Closure Liability, Hearings before the House Comm. on Government Operations, 96th Cong., 2d Sess. (1980); Hazardous and Toxic Waste Disposal, Joint Hearings before the Subcomms. on Environmental Rollution and Resource Development of the Senate Comm. on Environment and Public Works, 96th Cong., 1st Sess. (1979) (in four parts); House Comm. on Interstate and Foreign Commerce Subcomm. on Oversight and Investigation, Waste Disposal Site Survey (Comm. Print, 1979); Hazardous Waste Disposal, Hearings before the Subcomm. on Oversight and Investigation of the House Comm. on Interstate and Foreign Commerce, 96th Cong., 1st Sess. (1979); Surgeon General of the United States and Congressional Research Service, 96th Cong., 2d Sess., Health Effects of Toxic Pollution (Comm. Print, 1980); U.S. Office of Technology Assessment, *Assessment of Technologies for Determining Cancer Risks from the Environment,* June 1981; U.S. Environmental Protection

Agency, Office of Research and Development, ENVIRONMENTAL OUTLOOK 1980 (1980); Hazardous Waste Fact Sheet, EPA JOURNAL, Feb. 1979 at 12; Note: Inactive or Abnormal Hazardous Waste Disposal Sites - Coping with a Costly Past, 53 SO. CAL. L. REV. 1709 (190); Fisher, The Toxic Waste Dump Problem and A Suggested Insurance Program, 8 BOST. COLL. ENVT'L AFF. L. REV. 421 (1980); Goldfarb, Hazards of Our Hazardous Waste Policy 19 NAT'L RES. L.J. 249 (1979); Toxicology - Exact Use of an Inexact Science, 31 FOOD, DRUG & COSMETIC L.J. 455 (1976); Senkan and Stauffer, What to Do with Hazardous Waste?, TECHNOLOGY REVIEW Nov/Dec 1981, 34; MacMahon, In Pursuit of Public Health, TECHNOLOGY REVIEW, Nov/Dec 1981 at 51; Thilly, Chemicals, Genetic Damage and the Search for Truth, TECHNOLOGY REVIEW Feb/Mar 1981 at 37; Reif, The Causes of Cancer, 69 AMERICAN SCIENTISTS 437 (1981); Langer, Hazardous Waste Ghosts of a Prodigal Past, TECHNOLOGY REVIEW Aug/Sept 1980 at 10.

47. EPA has compiled a record of many of the hazardous waste incidents that have occurred around the country. The Agency reports, however, "The Quality of information on these incidents varies from complete reports of on-site investigations to abbreviated newspaper reports." 47 Fed. Reg. 16550 (April 16, 1982).

48. See Page & Talbot, A Generic View of Toxic Chemicals and Similar Risks, 7 ECOL. L. Q. 207 (1978).

49. Leunet, Handling Hazardous Wastes, ENVIRONMENT (Oct. 1980) at 7.

50. 47 Fed. Reg. 16550 (April 16, 1982).

51. For discussion of risk assessment, see Page & Talbot, supra note 48; KATES, RISK ASSESSMENT OF ENVIRONMENTAL HAZARD (1978); LOWRANCE, OF ACCEPTABLE RISK: SCIENCE AND THE DETERMINATION OF SAFETY (1976). See also Meyer, Compensating Hazardous Waste Victims: RCRA Insurance Regulations and a Not So "Super" Fund Act, 11 ENV'TL. L. 690, 697 n. 4 and accompanying text (1981). See also, Calabresi and Hirschoff, Toward a Test for Strict Liability in Tort, 81 YALE L.J. 1055, 1056 (1972); Note, Allocating the Costs of Hazardous Waste Disposal, 94 HARV. L. REV. 584, 600 (1981).

IIIA. ADEQUACY OF EXISTING COMMON LAW AND STATUTORY REMEDIES; BARRIERS TO RECOVERY

Introduction:

Scope--From Hazardous Substances to Hazardous Wastes

This part of the Study Group report responds to the charge contained in CERCLA §301(e), "to review the adequacy of existing common law and statutory remedies," and to evaluate the "nature of the barriers to recovery..." in compensating for harm to man from the release of hazardous substances, and in providing compensation for damages to natural resources.

Hazardous waste litigation involves the scientific and technological complexities and uncertainties referred to in Part II of the Report, on the Dimension and Complexity of the Hazardous Waste Problem, and these technical issues recurringly emerge in the form of evidentiary barriers, mostly without regard to the specific cause of action. [See Appendix A and Recommendations I and IX].

The Report draws on state common law sources from the fifty states and other U.S. jurisdictions, and on federal and state statutory sources. While general statements on availability and adequacy of remedies nation-wide can be made, it must be noted that private law suits for personal injury and property damage are generally based on state law, which does differ to some extent from state to state. Some of these differences are referred to in the body of the Report, but for greater detail, the supporting memoranda included as Appendices may be consulted.

The problem of injury from exposure to hazardous wastes is a recent and emerging one. This means that there are as yet very few reported hazardous waste cases -- first, because of the recency of awareness of injuries from hazardous waste disposal, and second, because relatively few claims have been made to date and most of the industrial defendants have preferred to settle rather than litigate such cases. As a result, much of the discussion of remedies for exposure to hazardous wastes must proceed by analogy to similar or related areas.

This report deals primarily with legal remedies for injuries and damage caused by exposure to hazardous wastes. In reading its charge in this manner, the Study Group has followed the essential emphasis of the Superfund law, which deals with hazardous substances that have entered the environment in the form of wastes and spills. CERCLA §102 defines "hazardous substance" in terms of pollutants regulated under a variety of environmental laws, and of spills of substances regulated by such laws as the Toxic Substances Control Act. Instances when hazardous substances may be released in other than waste form -- i.e., the application of pesticides regulated under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)-- are expressly exempted from the enforcement provisions of the Act.[1] Thus, the emphasis of this report, similar to the emphasis of CERCLA, is on remedying the adverse consequences of improper disposal, improper transportation, spills, and improperly maintained or closed disposal sites.[2]

CERCLA is not a regulatory statute in the same sense as the Clean Air and Clean Water Acts, or as the Toxic Substances Control Act -- i.e., it does not provide for the regulation of hazardous emissions, or with the regulation of the production or distribution of toxic or hazardous substances. CERCLA deals with hazardous substances at the point at which they enter the environment in the form of spills during transportation or otherwise, or in the form of wastes, during and after disposal. Thus, the remedies discussed in this report are legal remedies for personal injury, environmental damage and reduction of property value resulting from the spills of hazardous substances and disposal of hazardous wastes for which CERCLA provides cleanup and remedial activities. Throughout this report, both the terms hazardous substance and hazardous wastes are used, and their use is often interchangeable, because in the context of CERCLA, hazardous substances are generally dealt with at the point when they are about to, or have become, wastes.

In addressing the adequacy of existing remedies and barriers to recovery, this report will first address recurring problems that face the plaintiff regardless of the causes of action he has decided on: problems relating to the applicable statute of limitation, problems relating to the joinder or the combination of parties plaintiff and defendant, and problems relating to proof of causation. The discussion of these recurring issues is followed by an analysis of available causes of action, both statutory and common law.

1. Recurring Issues in Hazardous Waste Litigation

A. Statutes of Limitation

Commencement of the running of the statute of limitations can be a barrier to recovery under both common law and statutory remedies. This issue does not arise specifically from the applicable period of limitations which depends on the cause of action;[3] the question is when the statute begins to run -- the time when the action accrues. The plaintiff's ability to recover will often depend on whether a liberal discovery rule is applicable.

Exposure to certain hazardous wastes may result in cancer, neurological damage, and in mutagenic and teratogenic changes. Most of these types of injuries have long latency periods, sometimes 20 years or longer. With long latency periods, a rule which starts the running of the statute from the time of exposure will defeat most actions before the plaintiff knows of his injury. At least thirty-nine states have adopted a "discovery rule" in some form.[4] Even the rule that starts the running of the statute from the time of discovery of the injury, or from the time when the injury reasonably should have been discovered, may not protect a plaintiff who may not even be aware of the initial exposure, or who may not connect early symptoms with a known exposure. A more recent formulation starts the running of the statute from the time the injured party ascertains a causal connection between the injury and the earlier exposure or should reasonably be able to do so. Thirteen jurisdictions (California, Illinois, Iowa, Kentucky, Maryland, Massachusetts, Minnesota, Missouri, New Hampshire, Oklahoma, West Virginia, Vermont, Washington) have adopted this formulation. Another thirteen states postpone the accrual of the action until the plaintiff also realizes that he has a cause of action (Arizona, Colorado, Florida, Hawaii, Louisiana, Michigan, Montana, New Jersey, Puerto Rico, South Carolina, Texas, West Virginia, Wyoming).

A variety of other formulations exist; some commence the statute when the plaintiff's injuries are capable of ascertainment (Arkansas, Indiana, Kansas, Maine, North Carolina). Others commence it when the plaintiff actually discovers or knows that he has a particular disease or injury (District of Columbia, Nebraska); others when the plaintiff knows, or should know, in the exercise of reasonable judgment, that he has suffered a disease or injury (Delaware, Georgia, Tennessee and Connecticut, with the limit of three years after the act or omission that caused the injury).

Particular concern about product liability and toxic substances is reflected in statutes of limitation that relate specifically to injuries in those categories of cases. For example, Alabama has provided specifically for insidious diseases in product liability causes of action,[5] and in addition, enacted a provision specifically addressed to injury resulting from exposure to asbestos and asbestos-containing products.[6] At least two states, although not adopting a discovery rule for product liability cases, have extended the general limitations period in product liability cases.[7]

Two jurisdictions have statutes that reject any version of the discovery rule, (Idaho and Virginia), and four jurisdictions have rejected the discovery rule by judicial determination, (New York, South Dakota, Virgin Islands, Wisconsin).[8] Both New York and Virginia have somewhat softened the impact of their restricted statutes of limitation in cases where it was difficult to determine exactly when the injury occurred.[9] In these six jurisdictions, a plaintiff may still be time barred before he knows that he has been hurt.

A few jurisdictions have not as yet clearly determined the issue, though there is a trend in the direction of the adoption of the discovery rule. In states that have not as yet adopted a discovery rule, the statute of limitation remains a substantial barrier to recovery for injuries resulting from exposure to hazardous wastes.[10]

B. Parties

(1) Defendants

The identification of proper parties defendant is a recurring problem because long latency periods, changes of ownership of disposal sites, changes in the nature of wastes deposited, and multiplicity of exposure may leave liabilities unclear and the choice of defendants uncertain.

Four types of hazardous waste sites can be differentiated: inactive "orphan" sites for which no financially responsible owner can be found; other inactive sites; active sites which are still receiving wastes; and new sites. The discussion which follows is concerned with non-orphan inactive sites, active sites and new sites. The focus is on two major problems: (a) liability when ownership of the site has changed since the disposal occurred, where the cause of action is based on negligence, nuisance or strict liability; and (b) apportionment of damages among several parties.

A plaintiff might bring an action against one or more of the following:

(i) the person who did a wrongful act, i.e., the dumper or disposer of wastes, the person who by his wrongful or negligent act created the risk;

(ii) the person who, regardless of the wrongful or negligent disposal, now owns or leases the land on which a hazardous condition exists; or

(iii) the class or category of persons who may be regarded as collectively responsible for the creation of the hazard to the extent of each class member's "market share" or against an entire class of enterprises, industrywide.[11]

The choice of defendants would logically depend in the first instance on the cause of action, but many of the issues discussed below could arise, regardless of the cause of action.

(a) Liability for personal injury when ownership has changed

The general rule, as stated in the Restatement (Second) has been that a vendor of the land is liable to those injured under a negligence[12] or nuisance[13] theory for an artificial condition he created or permitted to remain on the land only until the vendee has discovered and abated it, or has had a reasonable time to discover and abate the condition. However, the prevailing approach seems to be that courts will look primarily at factors other than ownership in determining on whom liability should be imposed. This trend would mean, in actions involving private litigants, that the owner of land would be relieved of liability, especially for damages if not for injunctive relief, if he did not know of the earlier use of his land as a disposal site. On the other hand, prior owners of the site would not automatically be relieved of liability.

A number of recent cases involved a plaintiff government entity in either a civil action for recovery of cleanup costs or in an enforcement action. These cases imposed liability on former landowners and generators (and presumably, therefore, disposers) responsible for environmentally harmful conditions. Generally, these cases limit the liability of subsequent landowners unless they have in some way accepted or associated themselves with the creation or maintenance of the conditions.[14] [See Appendix C].

If affirmative conduct of some kind on the part of a defendant is required, plaintiffs in many hazardous waste cases will be unable to recover against current landowners, unless a statute expressly provides for such recovery.

At least eight states have enacted legislation imposing liability for a nuisance upon a subsequent owner not responsible for its creation.[15] Typical of the language used is California's provision, which reads:

> Every successive owner of property who neglects to abate a continuing nuisance upon, or in the use of such property, caused by a former owner, is liable therefore in the same manner as the one who first created it.[16]

The statutes generally have been read to impose liability on the present owner although he did not create or contribute to the nuisance.[17] Early cases interpreting these statutes often required that the successive owner have had notice of the condition upon his land and also to have failed to abate the nuisance in response to a specific request.[18]

The view of the Second Restatement, Prosser and other commentators, is that a vendee becomes liable for a hazardous condition on his land after he is given notice of the conditions, constructive or express, and has had reasonable time to correct it.[19] A further distinction is made between landowners harboring a private nuisance and those harboring a public nuisance. In the case of private nuisance, the vendee's liability may not commence until after he fails to abate the condition in response to a specific request.[20] "This is said to be because the vendee is entitled to assume, when he takes possession, that any existing private nuisance had the consent of adjoining landowners, and that if compensation for it is required, it has been paid."[21] In the case of a public nuisance, a request to abate is not a prerequisite to liability, "because a public nuisance, being criminal in character and an invasion of the right of the public, cannot reasonably be assumed by anyone to exist with public consent."[22]

In the absence of a statute imposing such liability, recent case law, unlike the Restatement (Second) may limit the liability of a subsequent landowner even after notice to him.

The trend toward limiting the liability of successor landowners is illustrated by a recent Pennsylvania case, Philadelphia Chewing Gum Corp. v. Commonwealth,[23] which held that a non-polluting successor to land may be liable to abate a nuisance on that land, including paying for cleanup costs, if some affirmative conduct is shown. In Philadelphia Chewing Gum Corp., the court held that if the owner (or lessee) knew, or should have known of the condition on the land, and also has by his conduct associated himself in a positive respect with the nuisance, beyond mere ownership or occupancy, the owner (or lessee) is responsible for abating the nuisance. The case is set forth at length because it shows the variety of practical situations encountered.

The case came to the court after Pennsylvania's Environmental Hearing Board had determined that there was pentachlorophenal mixed with oil beneath separate properties owned by two defendants, Rogers and Philadelphia Chewing Gum Corp., that was being discharged into local waters. Shell Corp. had leased the property from Rogers. The pentachlorophenal had been discharged on Roger's land 20 years earlier by one of the defendants, National Wood Preservers, when it had been owned by one Jacoby who later sold the business to the Goldstein family. The pentachlorophenal on Philadelphia Chewing Gum's property had got there as a result of the slope of the subsurface water table. The Environmental Hearing Board ordered Rogers, Shell Corp., Philadelphia Chewing Gum and National Wood Preservers to abate the condition. On appeal from the Hearing Board, the Pennsylvania Commonwealth Court reversed the Board's order pertaining to the Philadelphia Chewing Gum Corp., and to Shell Corp. The court found that Philadelphia Chewing Gum Corp., the landowner of property adjacent to the land where Jacoby dumped the chemical, neither knew about the condition nor associated nor adopted the condition in any way, and it was not held responsible for abating the condition. Shell Corp., one of Rogers's lessees, knew of the dumpings before entering into a lease, but engaged in no other conduct indicating an association or adoption of the condition. Therefore, it too was released from liability for abatement. Rogers, the owner of the land first leased to Jacoby and then to the Goldstein family, was imputed to have knowledge of the condition. Having received rent payments for twenty years from an industrial tenant who caused the pollution was considered to be a sufficient association to make Rogers liable for abatement of the condition. National Wood Preservers, now owned by Goldstein, was held liable because the court found that Goldstein had engaged in affirmative conduct that indicated an adoption of the condition.

When Goldstein purchased National Wood Preservers and took over the property from Jacoby, he was concerned that the property might be polluted. He obtained a warranty from Jacoby that no legal proceedings were pending or threatened, "except for a charge of stream pollution since cured." However, Jacoby subsequently was arrested for polluting, and Goldstein, who took some corrective measures, obtained a $35,000 credit from Jacoby in reduction of the purchase price. Based on these facts, the court concluded it was proper for the Board to have applied Pennsylvania's Clean Streams Law to National Wood Preservers.

The Supreme Court of Pennsylvania affirmed the lower court's decision pertaining to National Wood Preservers holding that the Board's order was a constitutional exercise of the state police power.[24] The Pennsylvania Supreme Court noted that the corrective order directed to National Wood Preservers was not based on mere ownership or occupancy, adding that the validity of an exercise of the police power over land "depends little upon the owner or occupier's responsibility for causing the condition giving rise to the regulation," and giving examples of the application of such regulations.[25] In applying §316 of the Pennsylvania Clean Streams Law, the court must seek to avoid an interpretation that, relying on ownership alone might be unduly oppressive. In the court's view, the basic question in such cases is whether the exercise of the police power is reasonable in light of the objective, means and effect on the landowner.

In Philadelphia Chewing Gum Corp., the state was one of the parties. In cases involving opposing private parties where damages are sought for personal injury, the issue is different and more unsettled, especially in regard to strict liability causes of action. The law in this area is in its infancy and will be determined by how courts define the limits of strict liability. [On strict liability, see Appendix K].

Even if the plaintiff can join, and prove a cause of action against, several defendants, such as successive landowners and an independent contractor who transported or disposed of the hazardous wastes [see Appendix C at 2-4], the plaintiff then must face the problem of apportioning damages among them.

(b) Apportioning Damages: Nature of Liability, joint or several, "market share", enterprise (industry-wide) liability

When compensation or cleanup costs are first paid out of a contributory or state fund (for example, Superfund), the liability for clean-up and remedial costs is, in a sense, collective and questions of joint or several liability will arise only in the subrogation action when the fund seeks to reimburse itself by collecting from the responsible party.[26]

At common law, two major questions arise: whether a potential defendant's conduct was a substantial factor in causing the injury and whether the liability of potential defendants is joint or several. The common law rule is that the plaintiff has the burden of proving that it is more likely than not that the conduct of the defendant was a substantial factor in bringing about the result.[27] When a number of parties contributed to the result (whether or not acting in concert), this burden may be impossible to sustain against any one defendant. This is usually the case where injuries result from hazardous wastes and different disposers, different owners, and sequential exposures may have in fact contributed to the result.[28] The substantial factor test is the basis for relieving some parties from liability under a de minimis rationale, known in hazardous waste situations as the "one drum exception."[29]

Even if the plaintiff meets the substantial factor burden, the question of allocating and apportioning damages still arises. In hazardous waste cases, the problems of apportionment and allocation can be an insurmountable barrier to recovery. In the common law tort context, when more than one party causes an injury, their liability may be joint or several, depending on the circumstances.[30] Whether a party is jointly or severally liable is, obviously, of importance to a plaintiff who wants to recover the full amount of damages which he has claimed. These problems have arisen in product liability cases involving DES (diethylstilbestrol) induced cancer in daughters of mothers who took the drug -- cases analogous to hazardous waste cases. The problem which arose is shared by generic drugs generally. Because of the inability to prove that a specific manufacturer made the drug which the plaintiff's mother ingested while plaintiff was a fetus, summary judgment for the defendant has been granted in Texas,[31] California[32] and, most recently, in New Jersey.[33] Tort law does provide, however, theories of joint liability and theories that shift the burden of apportionment to the defendants, though plaintiffs in hazardous waste cases may not always be able to rely on these theories.

Apportionment theories that shift the burden of apportionment to the defendants

Courts in other DES cases have not granted summary judgment for the defendant but rather have shifted the burden of apportionment to the defendants.[34] Tort law has two widely accepted theories, concert of action and alternative liability, that allow a plaintiff to join multiple defendants who have in some way contributed to the condition that caused plaintiff's injury, and two new theories, market share liability and enterprise liability. All four theories shift the burden to the defendants if the plaintiff has a cause of action against each of them. The theories -- concert of action, alternative liability, market share liability, and enterprise (or industry-wide) liability -- vary in regard to two important requirements, whether all possible defendants must be joined and the degree to which defendants must have acted in concert or agreement.

This discussion concerns apportionment of liability, and the plaintiff's burden of proof of causation, not the cause of action on which a claim is based. However, the cause of action may affect whether a particular apportionment theory is applicable. For example, the Second Restatement of Torts contains a caveat that "the Institute takes no position on whether [the concert of action theory is] applicable when the conduct of either actor or the other is free from intent to do harm or negligence but involves strict liability for the resulting harm."[35] But the cause of action theories and apportionment theories are distinct. Thus, the term "enterprise liability" is sometimes used in the literature to discuss a strict liability theory, and is also used in regard to one of the apportionment theories discussed below.

Concert of Action

Under the concert of action theory, a defendant is liable if he does a tortious act in concert with others or pursuant to a common design.[36] Defendants properly joined under a concert of action theory are jointly and severally liable for all the injuries to the plaintiffs.[37] To act in concert, the defendants need not have expressly agreed upon their plan, but rather the agreement may be implied from the conduct of the actors.[38] A drag race between two drivers, A and B, where A hits a pedestrian and the pedestrian sues both A and B as jointly and severally responsible, is an example of concert of action liability.

The original purpose behind concert of action appears to have been to deter antisocial behavior by groups of persons, by holding liable all those intentionally connected with the action.[39] The theory is being expanded to apply in strict product liability cases. For example, the theory has been approved in a DES case, when the plaintiff was unable to identify the specific brand of DES ingested by her mother, and there was evidence indicating that the manufacturers had joined in a form of concerted action.[40]

Alternative Liability

Alternative liability is a widely, although not universally, accepted theory. The Restatement (Second) of Torts approves of it.[41] It allows a plaintiff to recover against several non-concerting tortfeasors. The traditional alternative liability theory was applied in the California case, Summers v. Tice.[42] In that case, two hunters, while aiming at quail, fired negligently and simultaneously in plaintiff Summers's direction. One shot, and only one shot, hit Summers in the eye. In the suit for damages, Summers had no way to prove which defendant's shot had hit him. Rather than dismiss the suit because the plaintiff was unable to carry the traditional tort burden of proof as to who had caused the harm to the plaintiff, the court switched the burden to the defendants to prove that they had not created the injury to Summers. Because neither defendant was able to prove that the other defendant had injured Summers, defendants were deemed jointly and severally liable.

Alternative liability is based on the principles that it would be unjust to permit proven wrongdoers, one of whom has inflicted an injury upon an innocent plaintiff, to escape liability merely because the nature of their conduct has made it impossible or difficult to prove which of the defendants has caused the harm,[43] and that it is better for one of the tortfeasors to overpay than to make an innocent plaintiff bear the cost of the injury.[44]

The alternative liability theory has been used in several types of cases: (1) to shift the burden to defendants to prove which of them caused the injury where all acted wrongfully and the plaintiff is unable to show which-- the Summers v. Tice situation where only one of two defendants caused the single bullet wound injury but both had fired; (2) where each tortfeasor contributed to the damage, but the plaintiff cannot prove which was responsible for the majority of the damage, so the defendants bear the burden of apportionment; and (3) when several actors have caused an injury that is theoretically divisible but practically indivisible.[45]

Hazardous waste pollution by a number of discharges caused by several actors may sometimes fit the last category.[46] An example of a case applying alternative liability in a non-waste disposal context where the injury was only theoretically divisible is Borel v. Fibreboard Paper Products Corp.[47] In Borel, an industrial worker who, through his employment, had come into contact with several different brands of asbestos, was allowed to join all the manufacturers as defendants for negligence in omitting to supply him with adequate information regarding the dangers of inhaling asbestos dust. The worker, after 33 years of employment, had contracted asbestosis and, despite the defendants' claim that the plaintiff must bear the burden of proof in showing which defendant had caused what part of the damage, the court upheld joint and several liability, placing the burden on each of the defendants to prove that he could not have caused the damage.

Alternative liability does have important limitations, whether applied to a fact situation like Summers where several tortfeasors were involved in an action but only one did in fact cause injury to the plaintiff, or to a situation where more than one non-concerting defendant has caused a part of injury,[48] or to a Borel situation where several tortfeasors combined to create an injury that was theoretically divisible but practically indivisible. The plaintiff must have successfully stated a cause of action against all potential defendants. Failure to join all potential defendants creates the possibility that some or all defendants would be unable to prove that they had not caused the injury, and it would then be an exercise in pure speculation to assume that any of the named defendants had caused plaintiff's harm.[49] Therefore, if one of the polluters has gone out of business, the traditional alternative liability theory will not be applied.[50]

Enterprise Liability

Enterprise liability is a theory which combines features of both alternative liability and concert of action. Judge Weinstein discusses the theory at length in Hall v. E.I. DuPont de Nemours and Co., Inc.[51] As defined in Hall, the early precedents in enterprise liability relied on theories in tort law which impose joint liability on multiple defendants "when it is justifiable for an owner, employer, or manufacturer to rely on the services of another to guard against known or foreseeable risks."[52] The basis of the court's opinion is found in its statement that the "point is not only that the damage is caused by multiple actors, but that the sole feasible way of anticipating costs or damages and devising practical remedies is to consider the activities of a group."[53]

Hall involved two cases against manufacturers and a trade association. In eighteen separate incidents, children allegedly had been injured by blasting caps due to inadequate warnings and inadequate safety features. The court held that one of the actions involved "did not preserve the joint liability aspects of the case" where one manufacturer was identified as the producer of the blasting cap and only one other manufacturer was joined on a theory of industry-wide responsibility for certain features of the cap's design."[54] The court held, in regard to these plaintiffs, that the "arbitrary basis of plaintiffs' selection of the non-producer defendants, and the absence of any demonstrable need for joint liability in administrative or remedial terms, requires dismissal of the claims against non-producer defendants."[55] The court refused to dismiss another action in which the plaintiffs could not identify the particular manufacturers of the injury-causing caps and joined substantially the entire blasting cap industry and its trade association.[56]

Referring to workers' compensation, respondeat superior, and strict liability, the court said that such theories are based on a principle that places liability on those best able to distribute the costs that result from risk-creating activities. The court stated that to establish joint liability on the part of the explosives industry, the plaintiff was required to prove defendants' joint awareness of the risks and joint capacity to reduce or affect those risks.[57]

Assuming a cause of action has been stated, and defendants properly joined under a theory of joint liability, the burden of proof of causation of injury may be shifted from the plaintiff to the defendants, if the plaintiff can "establish some causal connection between the group-created risk and the injuries."[58]

Enterprise liability is similar to the concert theory because it requires some industry-wide practice to have been followed by the defendants. Pressures of market competition may create industry-wide practices.[59] It need not be an expressly agreed upon standard. Like alternative liability, it allows the burden of proof of causation for an indivisible injury to be switched to the joint defendants if they shared an awareness of the risk and the capacity to reduce the risk. Unlike alternative liability, and similar to the market share approach discussed below, enterprise liability would not require all the potential injury causers to be joined.[60]

Another principle underlying enterprise liability is fairness; the notion that the industry as a whole, not the individual corporation, should pay for damages that cannot be traced back to one defendant with certainty where an industry has created risks through similar tortious practices, such as inadequate disposal of toxic wastes.[61] In theory, spreading the additional costs to the industry may cause the industry to upgrade its practices and thus prevent future injuries.[62]

Enterprise liability in an industry-wide context has not yet been imposed.[63] The California Supreme Court in a later DES case, Sindell v. Abbott Labs.,[64] expressly rejected it, as have courts in Michigan[65] and New Jersey.[66] The Hall opinion itself states that enterprise liability may not be applicable to a large number of manufacturers in a decentralized industry.[67] For that reason, the court in Sindell refused to impose enterprise liability and instead proposed a theory of market share liability. Indeed, CERCLA, in placing costs on the chemical and crude oil industry generally, has adopted a closely analogous approach.

Market Share Liability

The California Supreme Court, in Sindell v. Abbott Laboratories, proposed market share liability to ease the restriction under the alternative liability theory that demands that all potential injury causers be joined before shifting the burden of proof of causation.[68]

The facts of the case were that the plaintiff, a victim of cancer caused by her mother's ingestion of DES, was unable to name the specific manufacturer of the pills which her mother had taken. She therefore joined eleven of the major manufacturers of the drug.

The court would not apply alternative liability since the plaintiff had not joined all 200 producers of the DES. Neither would the court apply a concert of action theory since, according to the court, the plaintiff could not prove an understanding between all defendants to act in a particular manner.[69] The court also rejected enterprise liability as being non-applicable.[70]

However, rather than dismiss the case for plaintiff's failure to prove causation against any one defendant, the court applied a market share liability theory. Relying on the Summers case and the Restatement (Second) of Torts §433 as a basis, the court shifted the burden of proof of causation to each defendant manufacturer. Unlike alternative liability, the manufacturer under the market share theory would not be held jointly and severally liable for the entire injury if the manufacturer was unable to prove that the plaintiff's mother had not ingested DES produced by it. Rather, each defendant, unable to prove that the plaintiff's injury was not caused by it, would be liable for a percentage of the plaintiff's injury. The percentage of liability for the injury would be the percentage of the market of DES that each defendant was responsible for selling.

The court reasoned that if a corporation was responsible for 15 percent of all DES sold, it was responsible for 15 percent of all DES related injuries, and thus even though a plaintiff could not prove in fact that a particular manufacturer had marketed the drug which caused plaintiff's injury, the defendant, in the long run, after several cases using a market share theory, would pay for the damages which it had caused.

In order to avoid unfairness to the defendants, the court held that the plaintiff must have joined enough manufacturers to constitute "a substantial percentage" of the market.[71] The court also analogized its reasoning to Justice Traynor's concurring opinion in *Escola v. Coca-Cola Bottling Co* ,[72] citing his emphasis upon the greater incentive for product safety that should result from holding the manufacturer liable.[73] In *Sindell*, all manufacturers were deemed to have engaged in the conduct complained of -- manufacturing, marketing and promoting DES without adequate testing or warning and without monitoring or reporting the effects.

Market share liability, like alternative liability, allows an innocent plaintiff to get relief from defendants against whom a cause of action has been stated, even if the plaintiff cannot prove which defendant actually caused the injury. Also, like alternative liability, the burden of apportionment shifts to the defendants. The difference between market share liability and alternative liability is that where the alternative theory requires that all potential injury causers be joined, the market share theory requires only that the joined defendants make up a substantial percentage of the market.

Market share liability is not without its critics.[74] It will shift the burden of proof onto the defendants, even when the defendants have access to no more information than the plaintiff.[75]

Defendants: Conclusion

In a hazardous waste case, a plaintiff will look for a theory on which he can join all solvent potential defendants. Two major barriers could prevent recovery. A present solvent owner of the disposal site may be the easiest to sue, but a court may not impose liability, whether the claim is based on negligence, nuisance or strict liability, for past actions in which he did not participate, acquiesce in or subsequently ratify in some affirmative way. The second barrier is the fact that even if several parties are theoretically responsible and joined as defendants, the plaintiff will then bear the burden of apportioning damages among them, unless the court will shift the burden of apportionment to the defendants. The court may do this under one of the two established theories: concert of action or alternative liability, if the plaintiff can meet the recognized criteria for their invocation. In some hazardous waste cases, plaintiffs may not be able to rely on a concert of action theory because it requires that the defendants have acted in concert with others pursuant to a common design. Alternative liability also may not be available because it requires that all potential defendants be joined. To avoid problems presented by the more established theories, a plaintiff might turn to the market share liability theory or to enterprise liability, but the newer theories are undeveloped. Neither requires that all potential defendants be joined, but enterprise liability, similar to concert of action, would require some industry-wide practice. Market share liability might present a problem for plaintiffs because the theory, as defined in Sindell, pertains to defendants all of whom are sellers of a product which caused the injury and all of whom engaged in the same conduct. A hazardous waste case, unlike DES cases, could involve several categories of defendants (generator of the waste, transporter, disposal site operator, prior and subsequent landowners) and many different chemicals disposed of by different parties. A joint liability theory, if applied in such a case, would probably involve reasoning similar to that in the discussion in Hall of the precedent for joint liability and enterprise liability. Plaintiffs may not be able to join, and prove a case against, all potential defendants involved in the generation, disposal and maintenance of hazardous waste given the difficulties in imposing joint liability and apportioning damages, and given the limits on liability of subsequent landowners.

(2) Plaintiffs

The question of who would be a proper plaintiff under a certain cause of action is not as complex as the problem of naming the proper defendants and apportioning damages. The definition of most causes of action defines the outer limits of who may recover. Trespass involves invasion of the plaintiff's possessory interest in land. Nuisance involves interference with the use and enjoyment of land. Negligence requires the plaintiff to show that the defendant's conduct has fallen below the standard for the protection of others against unreasonable risk of harm. Strict liability for hazardous activities has generally developed in conflicts between adjoining landowners or owners of land in proximity to the activity. Hazardous waste cases could involve fact situations extending far beyond the common strict liability cases, but this is not likely to create a special problem with respect to proper parties plaintiff.

In view of the complexity of hazardous waste litigation which has been noted, the most significant barrier to potential plaintiffs litigating their claims is the cost of litigation. One way to reduce litigation costs is to make it easier for persons with similar claims to join in one action. Exposure to hazardous wastes often may affect several individuals in one location. While the precise nature of the injury or of damages may differ, elements of exposure or causation may be similar or identical. A mode of reducing the plaintiff's or defendant's cost of sophisticated scientific testimony may well be the use of such procedural devices as voluntary joinder of parties, as under Fed. R. Civ. P. 20 or its state analogues, or the transfer and consolidation of actions for joint trial of issues involving common questions of law or fact.[76]

When actions are originally brought in several districts, consolidation must be preceded by transfer under 28 U.S.C. §1404(a) to a district where the action may have been brought initially. Another available device is transfer from coordinated pretrial under 28 U.S.C. §1407 to any federal district court. Another approach is the offensive use of collateral estoppel, which has been allowed in some instances.[77] Under the same doctrine, test cases have been brought in which a single plaintiff tried the issue of liability on behalf of the entire class.[78] There have also been some significant efforts at voluntary coordination of the negligence bar, as in the formation of the Dalkon Shield Group in 1974, in the DES cases, in actions against Chevrolet for motor mount failure, and for the MER/29 drug cases.[79]

The use of class actions in mass tort cases has been upheld in some instances and denied in others. Such tort class actions are regarded by several authorities, including the majority of members of the Study Group, as unacceptable.[80]

Plaintiffs: Conclusion

One of the significant barriers in hazardous waste litigation is the difficulty of proof of causation which requires major efforts and expenditures to secure expert scientific and medical testimony. Such expense and effort would only be warranted in cases involving very large claims. To overcome this barrier, the joinder or other cooperation of similarly situated plaintiffs with other than very large claims, becomes necessary to allow the many significant but modest claims to be litigated. The revision of joinder rules and other procedural rules for coordination would greatly ease plaintiffs' practical burdens and would remove barriers to the recovery of valid claims.

C. Proof of Causation

Regardless of the cause of action, a recurring problem in hazardous waste litigation is that of proof of causation. The plaintiff must prove in each case that there is a causal nexus between the disease or injury complained of and the environmental condition (such as the disposal of hazardous wastes) for which the defendant is allegedly responsible. The issue of proof of causation is rendered more difficult by a number of recurring circumstances. In the case of exposure to a hazardous waste disposal site, the plaintiff may find it very difficult to pinpoint responsibility because the site has usually received a variety of hazardous wastes from a variety of sources over an extended period of time. The problem will be rendered even more complicated because of the long latency periods frequently associated with injuries from hazardous waste exposures. During a ten-to-forty year latency period, the site may have changed ownership several times -- and the plaintiff, too, has probably moved about to different locations, thereby potentially exposing himself to a variety of other environmental influences or toxic exposures.

Proof of causation will require large amounts of sophisticated medical and scientific testimony to demonstrate the epidemiologic or statistical correlation between certain diseases and certain environmental exposures. The nature of the exposure itself--whether by air, water, ingestion, inhalation or other contact--may require testimony, so as to show that the kind of exposure, its duration or frequency, and its intensity, could or did produce the kind of disease or injury suffered by the plaintiff. Medical testimony on the etiology of the disease is necessary to show how the particular substance caused the condition complained of.[81]

In addition to reliance on expert witnesses, some reliance on government data produced under a variety of federal laws (such as the Federal Insecticide, Fungicide and Rodenticide Act, FIFRA; the Toxic Substances Control Act, TOSCA; the Resource Conservation and Recovery Act, RCRA; the Occupational Health and Safety Act, OSHA; the Federal Food, Drug and Cosmetic Act, and the Federal Clean Air and Clean Water Acts) may eventually be possible. Moreover, in certain circumstances such as in Workers' Compensation Laws, rebuttable presumptions may serve useful probative purposes. But it is clear that proof of the causal connection between exposure and injury is an almost overwhelming barrier to recovery, particularly in smaller cases (regardless of their merit) because the cost of mounting the massive probative effort and the arrays of technical and scientific evidence will be prohibitive.

2. Causes of Action

A. Statutory Remedies

Several federal and state environmental statutes provide for civil or criminal actions against violators of standards set forth in the statute or in regulations,[82] but statutory provisions for recovery by private plaintiffs for property damage are rare, and even rarer for personal injury.[83]

State statutory remedies vary greatly; the prevailing approach of the states is to leave private plaintiffs in hazardous waste cases to their common law remedies.

(1) Federal Statutes

The following federal statutes provide benefits to individuals for personal injury: Social Security Disability Insurance,[84] Medicare,[85] and Medicaid,[86] the Black Lung Benefits Act,[87] Federal Employers Liability Act,[88] The Jones Act and Merchant Marine Act,[89] Longshoremen's and Harbor Workers' Compensation Act,[90] Price Anderson Act,[91] and the Federal Tort Claims Act.[92]

These statutes, as Appendix D points out, can be classified into three groups: (1) statutes providing compensation to any individual without regard to the cause of disease or injury; (2) statutes providing benefits to members of particular groups for injuries arising out of a particular activity, and (3) statutes providing compensation to anyone injured as a result of a particular type of incident.

None of these statutes is aimed at providing remedies for personal injury or damage due to hazardous waste, but they do represent federal statutory approaches to the two major considerations in a statutory benefits scheme: (1) scope of coverage, and (2) procedural and substantive rules for recovery. Two of these statutes are of particular relevance to the Report: The Black Lung Benefits Act and the Federal Tort Claims Act.

The Black Lung Benefits Act of 1972 is of special interest because it addresses problems similar to the problems that a statute providing for remedies for injury due to hazardous wastes would address, and because the Supreme Court, in 1975, considered certain issues regarding the Act that are pertinent to this Report. The Black Lung Benefits Act provides benefits to coal miners suffering from pneumoconiosis ("black lung disease") and to survivors of miners who have died from, or were totally disabled by the disease. The Supreme Court in Usery v. Turner Elkhorn Mining Co.,[93] upheld the Act after considering challenges to it by coal mine operators who objected to retroactive aspects of the Act and to its presumptions and evidentiary rules. The coverage of the 1972 Black Lung Benefit Act and the scope of its presumptions was narrowed in 1981 when the Act was amended by the Black Lung Revenue Act of 1981.

The Federal Tort Claims Act (FTCA) is of interest because the federal government might own the disposal site or the wastes. Government ownership of property is not itself a basis for liability under the FTCA.[94] The Act contemplates liability only for the torts of government employees or agents, not for claims based on ownership of land.

Whether an independent contractor would be considered an employee for purposes of the FTCA would depend on a factual analysis of the Government's control of the contractor's activities. Perhaps the dangerous nature of hazardous waste disposal would give rise to a higher degree of responsibility and consequently a greater likelihood of liability, as in cases involving private employers and independent contractors.

Other federal statutes with remedial implications are the Resource Conservation and Recovery Act of 1976 (RCRA), and the Superfund legislation itself, the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA). Neither RCRA nor CERCLA provide benefits to individuals for personal injury or for property damage or loss, but both of these laws impose requirements that certain persons who transport or dispose of hazardous wastes obtain and carry third party liability insurance, to assure that claimants will recover judgments for damages and that the Federal Government will recover the cleanup and other expenses pursuant to the liability provisions of CERCLA §107.

(2) State Hazardous Waste Statutes; State Oil Pollution Statutes

Several state statutes reiterate the availability of common law remedies,[95] but only four states have created private statutory causes of action for personal injury due to hazardous wastes.[96] [See Appendix E].

Two of these states, North Dakota and Rhode Island, have created a private cause of action for personal injury that reflects a negligence *per se* approach.

The North Dakota Environmental Law Enforcement Act of 1975[97] does not apply just to hazardous wastes. The Act provides a private action for "any person aggrieved by the violation of any environmental statute, rule, or regulation... to recover any damages that have occurred as a result of the violation...."[98] Compensation for personal injury probably is included in "damages" in the above provision.

The Rhode Island Hazardous Waste Management Act imposes liability for "all damages, losses, or injuries" resulting from disposal of hazardous waste in an authorized manner or location.[99]

Two other states have passed statutes providing for strict liability for personal injury in hazardous waste cases: Alaska and North Carolina. Maine imposes strict liability for improper disposal of hazardous waste, but recovery is limited to property loss and loss of income.[100]

Alaska's provision is the broadest; a person in control of hazardous substances is strictly liable for damage to persons or property whenever the hazardous substances enter water or lands of another.[101]

In contrast, North Carolina's strict liability statute is limited to damage and injury caused by hazardous substances that enter the waters of the state -- surface water and groundwater, public or private, natural or artificial.[102]

New Hampshire law provides a unique measure of compensation to a successful plaintiff. A defendant is liable to a successful plaintiff in an amount equal to three times any actual damages sustained by such plaintiff, if the defendant has been convicted of a violation of the Hazardous Waste Management Act and that violation has led to the injury to the private plaintiff.[103] However, the statute provides: "The provisions of this section shall not relieve the plaintiff from the burden of proving the defendant's liability."[104]

A number of states, mostly coastal and Great Lakes states, have enacted statutes to deal with the problem of oil pollution on state coastal and inland waters.[105] Personal injury claimants cannot rely on these statutes because either they explicitly apply to property damage or it is unclear whether personal injury is included. In addition, to providing for the prevention and control of oil spills, including the licensing of terminal facilities, the provision of criminal fines and civil penalties, they generally contain clean-up provisions of some type.[106] Generally, the polluter is under an obligation to clean up the unlawful discharge, but the state may itself contain and remove the oil, with either the entire cost or some portion to be borne by the polluters.[107] Some states follow the federal law in establishing limited liability for clean-up costs, except in cases of willful negligence or misconduct.[108]

The majority of states hold the polluter liable for all costs reasonably incurred in the removal of oil unlawfully discharged, and extend the liability to the cost of restoring damaged areas to their original condition.[109] A few states, Florida, Massachusetts, Maine, and Washington also expressly extend liability to private claims for damages to real or personal property;[110] other states may do so under less direct provisions of the law.[111] The states differ with respect to the imposition of strict liability and the availability of the kind of defenses also found in §311 of the Federal Clean WAter Act.[112]

The provisions discussed above create private causes of action. A few states assist injured parties by other means. These statutes are concerned with one of four major problems common to hazardous waste cases: financial responsibility of the owner or operator of a hazardous waste disposal site, state funds, apportionment of damages among multiple defendants, and a plaintiff's burden of proof in establishing causation.

(a) Financial Responsibility

Only two states, Florida and Oklahoma, have legislation specifically aimed at insuring an owner's or operator's financial ability to pay for damages to private plaintiffs. Florida Requires that an owner or operator be bonded or insured for any liability that may be incurred in the operation of the facility.[113] Oklahoma requires insurance for bodily injury and property damage that could result from operation of the site during operation and after closing.[114]

The Florida and Oklahoma statutes are attempts to insure that defendants are solvent, but in many cases, insurance or bonding under such statutes would not cover all potential liability. Florida requires varying amounts of financial responsibility depending on the probability of damage.[115] It also must be noted that the amount of coverage which is determined to insure financial responsibility "represents the maximum financial responsibility of the owners or operators of such...facility."[116] The financial responsibility requirement of an owner or operator holding cash, surety bonds or casualty insurance, may be waived when "due to the size or magnitude of the operation, waiving the requirement will not conflict with the purposes of the requirement."[117] The Oklahoma statute requires that "[l]iability insurance shall be provided by the applicant and shall apply to sudden and non-sudden bodily injury or property damage.... Such insurance shall be maintained for the period of the operation of the facility and shall provide coverage for damages resulting from the operation of the facility during operation and after closing..."[118]

Five states require the appropriate agency to issue rules and regulations regarding the financial responsibility of the operator of the facility.[119] None of the statutes, however, indicates the extent of the liability to be covered.

Six other states require financial responsibility for maintenance, operation, closure, or perpetual care; but these statutes contain no mention of funds to cover liability for property damage or personal injury.[120]

(b) State Funds that a Plaintiff May Claim Against

Many states have created state hazardous waste trust and spill funds.[121] Alabama,[122] Arizona,[123] California,[124] Colorado,[125] Connecticut,[126] Georgia,[127] Illinois,[128] Louisiana,[129] Maryland,[130] Michigan,[131] New Hampshire,[132] New Mexico,[133] North Carolina,[134] Pennsylvania,[135] Tennessee,[136] and Wisconsin[137] have set up funds for emergency cleanup of a hazardous waste spill or leakage, but these funds may only be used for containing, removing or mitigating the effects of a hazardous chemical leakage. Private claims for damage or injury are not expressly allowed to be made upon the emergency spill response funds.

New Jersey created a fund to pay for cleanup of hazardous substance discharges, but the New Jersey law provides that "the fund shall be strictly liable, without regard to fault...for all direct and indirect damages no matter by whom sustained..."[138] In listing non-exclusive examples of damages, the statute does not mention damages for personal injuries, but does refer to real and personal property damage. After paying out damages to the claimant, the fund may recover payment from the strictly liable discharger by subrogation of the claim.[139]

The New Jersey statute states the fund is "strictly liable...for all direct and indirect damages no matter by whom sustained...;"[140] However, the examples of damages do not specifically include bodily injury, but neither does the statute specifically exclude bodily injury as a measure of damages.[141]

New Jersey statutory law also makes the chief executive of the New Jersey Spill Compensation Fund responsible for promoting settlements between the claimant and the person responsible for the discharge.[142] If the discharger is unknown, the claimant can arrange a settlement with the fund.[143] When agreement cannot be reached, the issue is resolved by arbitration.

The Florida Hazardous Waste Management Trust Fund allows individual plaintiffs to make claims upon it by documentation of damages and proof that the damages were the direct result of the release of hazardous waste into the environment.[144] However, only claims for real or personal property damages can be made; personal injury claims will not be allowed.

California recently enacted the Hazardous Substances Account Act,[145] which provides an administrative compensation scheme for victims who cannot identify the source of the damaging release of toxic wastes or the party responsible for it.[146] Also eligible are victims who can find no liable party or no solvent party from whom to collect the damages.[147] Compensation is limited to full, uninsured medical expenses and 80 percent of all uninsured loss of income, up to $15,000 per year for three years, proximately caused by injury to the victim's person or property.[148]

The victim is merely required to provide a sworn verification of the claim to the best of his knowledge, a "full description, supported by appropriate evidence from government agencies of the release of the hazardous substance claimed to be the cause of the physical injury or illness or loss of income," certification of place of residence and full medical history for the five years preceding the claim, and evidence of his income for the three years preceding the claim.[149] Compensation for the same injuries or loss of income from any other source precludes indemnification or reimbursement from the state fund.[150]

Claims must be brought within three years from the date of discovery of the loss, or from January 1, 1982, whichever is later.[151] Any compensation award is payable out of a state fund constituted by a tax on hazardous waste disposal within the state,[152] and the state is then subrogated to the victim's claim against any party subsequently found liable.[153] The compensation scheme has little or no effect on other plaintiffs' remedies, for two reasons: first participation in the administrative scheme is not a condition precedent to pursuit of any other remedy; second, any settlement, compensation or decision resulting from the claims procedure is inadmissible as evidence of any issue of fact or law in any other administrative or judicial proceeding.[154] In sum, the California scheme provides compensation to victims who would otherwise be unable to obtain relief, and finances this compensation by an analogue to the Hazardous Wastes Response Trust Fund created by CERCLA.

In 1982, Minnesota's legislature passed H.F. 1176, the Environmental Response and Liability Act. The legislation established a spill fund to hasten remedial cleanup efforts and also decreed that owners and operators would be strictly liable for personal injury and property damages. The statute of limitations was set at six years from the date of discovery of the loss.

The Act was vetoed by the Governor, who stated in his March 19th letter to the Speaker of the Minnesota House of Representatives that "retroactive" application of strict liability would not be "reasonable" or "fundamentally fair." In his view, only prospective application would be acceptable.

Moreover, enactment, he thought, would destabilize the insurance market and discourage businesses from settling in Minnesota. Note that there was no express concern over the preemptive effect of CERCLA.

Several of the state oil pollution laws create a state fund by exacting a fee or tax from tankers and other vessels that carry oil and use harbor or terminal facilities. These funds are drawn on to pay for cleanup costs, and in some states, they are also available to compensate private claimants for property damage. The fund is then subrogated to the extent of the claim. It had been held in Askew v. American Waterways Operators, Inc.,[155] decided in 1973, well before the enactment of CERCLA, that FWPCA §311 and federal admiralty jurisdiction did not preempt state oil spill and clean-up fund, and it appears to be the legislative intention of CERCLA not to interfere with the operation of such state funds insofar as they do not duplicate the provisions of the Superfund legislation with respect to source of funds, and imposition of further burdens on the chemical industry, though the issue is not entirely free from doubt and commencement of litigation of the issue in New Jersey may be noted.[156]

The availability of a private remedy for the collection of damages caused by oil spills is limited, however, and unless the states extend their laws, private claims for hazardous waste spills will not be covered.

(c) Apportionment of Damages

North Carolina and California are the only two states that have enacted a statute apportioning the damages for personal injury among all persons having control over or causing or contributing to the discharge of hazardous substances.[157] Such persons are jointly and severally liable under both statutes, but relief is restricted under the North Carolina provision because it is limited to hazardous substances that enter the waters of the state. The California statute permits the court to "apportion such costs or expenditures, [recoverable under the statute] to the extent practicable, according to equitable principles among the defendants."[158] Since hazardous wastes commonly enter subsurface waters, the law may be applied notwithstanding this limitation.

(d) Plaintiff's Burden of Proof on the Issue of Causation

One state, Pennsylvania, has apparently eased a plaintiff's burden of proof on the issue of causation in a personal injury action. Pennsylvania's solid waste management statute establishes a rebuttable presumption of causation for injuries that occur "within 2,500 feet of the perimeter of the area where the hazardous waste activities have been carried out."[159] The statute does not specifically mention "personal injury," but it imposes liability for "all damages" so personal injuries appear to be covered.[160]

As the above discussion shows, no federal statute creates a private cause of action for personal injury due to hazardous wastes, and only four states have statutes that provide for a private action for personal injury. One of these, North Carolina, is limited to injury from water pollution and two, North Dakota and Rhode Island, apparently limit recovery to injury caused by disposal specifically in violation of a statute or regulation.

Generally, then, a plaintiff will have to look to state common law or perhaps to a public nuisance statute, separately covered in the Report.[161] The discussion which follows immediately considers whether a plaintiff can rely on a statute in a plenary action even though the statute does not expressly create a private right of action.

(3) Private Remedies for Violations of Environmental Statutes

Even if a statute does not expressly create a private right of action for personal injury due to hazardous wastes, a plaintiff might rely on the statute on one of two grounds: that a private right of action might be implied, or that violation of the statute is negligence *per se*. [See Appendix F].

(a) Federal Statutes and Claims Under Federal Common Law of Nuisance

Whether a private remedy can be implied from a federal statute depends on the four criteria that the Supreme Court enumerated in *Cort v. Ash*,[162] but refined and restricted in later cases.[163]

The four factors that the Court listed as relevant to determining whether a private right of action should be implied are:

(1) whether the claimant is a member of the class protected by the statute;

(2) whether the Act's legislative history indicates an intention to either create or deny a private remedy;

(3) whether implying a private remedy is consistent with the Act's purpose; and

(4) whether the cause of action is one relegated to state law.[164]

The crucial issue under a Cort analysis, as refined in later cases, is narrower than the issue of whether the claimant is the member of a class intended to benefit from the statute.. The issue is whether Congress intended to create a private right of action.[165]

This rationale places a great burden on claimants seeking relief for violation of a federal environmental statute, as is demonstrated in a recent case narrowing the application of the Cort factors, California v. Sierra Club.[166] The plaintiffs, an environmental organization and two private citizens, sought to enjoin the construction and operation of certain water diversification facilities on the ground that the facilities would degrade water quality in the Sacramento-San Joaquin Delta in violation of §310 of the Rivers and Harbors Appropriations Act of 1899.[167]

The Court reasoned that §310 was a "kind of general ban which carried with it no implication of an intent to confer rights upon a particular class of persons."[168] This rationale is applicable to many, if not all, environmental statutes.

The Supreme Court stated in California v. Sierra Club that the latter two Cort factors, consistency with the legislative scheme and whether the cause of action is relegated to the state remedies, are only of relevance if the first two factors give an indication of congressional intent to create the remedy.[169]

Common law remedies for personal injury probably are restricted to state law, in light of the Supreme Court's opinions in Middlesex County Sewerage Authority v. National Sea Clammers Association[170] and Milwaukee v. Illinois and Michigan[171] which held that comprehensive water pollution control legislation preempted the federal common law of nuisance.

The fourth criterion, consistency with the legislative scheme, could also preclude recovery. In addition to their federal nuisance claims, the Middlesex plaintiffs based their suit upon alleged violations of the FWPCA and the Marine Protection Research and Sanctuaries Act of 1972 [hereinafter MPRSA].[172] FWPCA directly restricts discharges into United States waters and "made it unlawful for any person to discharge a pollutant without obtaining a permit and complying with its terms."[173] In addition, the Act establishes comprehensive regulation of discharges into the United States coastal waters.[174] It requires a permit for such discharges when the material is transported from locations outside the United States on board an American air or sea vessel.[175] The Act also requires a permit for discharging material transported from locations outside the United States into territorial seas or into the zone extending twelve miles from the coastline "to the extent that it may affect the territorial sea or territory of the United States."[176]

Plaintiffs contended that defendants, Environmental Protection Agency and the Army Corps of Engineers, permitted other defendants to discharge pollutants in amounts greater than those sanctioned by the Acts. They contended further that certain defendants contravened the terms of their permits.

The Court held that plaintiffs were not entitled to a private remedy. In doing so, it emphasized the comprehensive enforcement provisions, including citizen suit provisions, contained within each act. For example, FWPCA authorizes the Administrator of EPA to issue compliance orders and bring civil suits in response to violations of the Act.[177] It permits him to seek a civil penalty of up to $10,000 for each day of violation and provides, as well, for criminal penalties.[178] The Act allows states to conduct their own permit programs for discharges into their navigable waters only after they demonstrate authority to abate violations with civil or criminal penalties or by other means.[179] Under the Act, interested persons may seek United States Court of Appeals review of various actions of the Environmental Protection Agency.[180] Finally, the Act contains a citizen suit provision which permits private parties to bring an action to compel any person, including the United States, to comply with the Act's provisions.[181]

In view of the Act's comprehensive enforcement provisions, the Court concluded it could not assume that Congress intended additional remedies be available to private litigants suing under FWPCA and MPRSA.[182] The Court deemed it an "elemental canon of statutory construction that where a statute expressly provides a particular remedy or remedies, a court must be chary of reading others into it."[183]

Many federal anti-pollution statutes contain comprehensive enforcement provisions which are often supplemented by provisions for citizen suits.[184] Under the rationale of the Middlesex Court, plaintiffs seeking private relief for the violation of such statutes are not likely to prevail.

(b) State Statutes: Implying Rights of Action for Statutory Violations

The general standard that state courts use in implying rights of action is first, to determine whether the legislature specifically intended to provide or not to provide a private remedy. If neither intent is found, the court examines the policy underlying the statute or the legislature's purpose.[185] Generally, the plaintiff must demonstrate "he [is] within the group of persons for whose benefit the legislation was adopted and ... that the interests invaded, the harm resulting to that interest, and the hazard producing the harm are all within the purview of the legislative provision."[186]

Milwaukee v. Illinois and Michigan[187] would not affect state courts' interpretation fo whether state common law has been displaced by a state statute. This clearly appears to be a matter of general principles of statutory interpretation. In the first place, state common law is distinguishable from the much narrower federal common law concept. So, absent a preemptive federal statutory provision, a state statute probably would not displace a state common law remedy unless the state statute is intended to repeal or modify the common law.[188]

(4) State and Federal Statutes: Statutory Violations and the Negligence Standard

Even if a state court does not imply a private right of action from an environmental statute, it might use a violation of a statutory standard in a negligence action in one of two ways, either as establishing negligence per se or merely as some evidence of negligence.

As with implying civil remedies from legislative enactments, the court principally focuses on legislative intent to determine whether to adopt a statutory standard of conduct in a negligence suit.[189] Thus, where legislative intent to provide a civil remedy is clear, the inquiry need proceed no further. Where such intent is not apparent, the statutory standard may still be urged as a measure of due care in negligence. The standard may be adopted when the enactment is construed as intended to protect the particular class of persons to which the plaintiff belongs;[190] the statute's violation causes an invasion of the interest(s) the enactment is intended to protect;[191] and the harm caused by the violation is the type against which the statute is intended to guard.[192]

Most courts which utilize the statutory standard in negligence suits hold that an unexcused violation of it is dispositive on the issue of negligence -- negligence per se. Those courts directly adopt the legislatively established standard of conduct and permit the jury no opportunity to modify it. The only task remaining for the fact finder is to rule on the causal connection between the violation and the plaintiff's injury as well as upon the applicability of the traditional defenses of assumption of risk and contributory negligence.[193]

A significant minority of courts hold that the statutory violation is only some evidence of negligence. Those courts permit the jury to consider the legislative declaration of reasonable behavior together with other relevant factors in deciding for itself what constitutes reasonable behavior under the circumstances.[194]

Federal statutory standards have been the basis for negligence *per se* claims in a state action. In *Orthopedic Equipment Co. v. Eutsler*,[195] the United States Court of Appeals for the 4th Circuit held that violation of the duty created by the Federal Food, Drug and Cosmetic Act, 21 U.S.C.A. §§301-302, would be deemed negligence *per se* under Virginia common law.

Whether or not a state court will use violation of a statutory standard to imply a private cause of action, or to establish negligence *per se*, the issue may arise whether compliance with statutory requirements or regulatory standards is a defense. The general rule is that it is not. [See Appendix G]. Compliance will preclude a finding of negligence *per se*, but it will only be some evidence of due care on the issue of negligence.

The issue then becomes under what circumstances a person can be held to a higher degree of care in an action for negligence than that required by statute. The two major statements are Dean Prosser's and the Restatement's. Under both formulations, the plaintiff must first establish the circumstances contemplated by a statute or regulation for its prescription to apply, so as to be able to urge a reason for imposing a standard of care higher than the statutory or regulatory standard.

Under Dean Prosser's formulation, a "universal circumstance" must be identified:

> Where there is a normal situation, clearly identical with that contemplated by statute or regulation, and no special circumstances or danger are involved, it may be found, and can be ruled as a matter of law, that the actor has done his full duty by complying with the statute, and nothing more is required...
> But if there are unusual circumstances, or increased danger beyond the minimum which the statute was designed to meet, it may be found that there is negligence in not doing more.196

The Restatement (Second) of Torts adopts a similar standard for determining the minimal circumstances covered by a statute. Section 288C of the Restatement states:

> Compliance with a legislative enactment or an administrative regulation does not prevent a finding of negligence where a reasonable man would take additional precautions.197

The Comment to this section suggests that any reason for extra caution may constitute a special cirsumstance:

> Where there are no such special circumstances, the minimum standard prescribed by the legislation or regulation may be accepted by the triers of fact, or by the court as a matter of law, as sufficient for the occasion; but if for any reason a reasonable man would take additional precautions, the provision does not preclude a finding that the actor should do so.198

Statutory law has paid little attention to providing private remedies for personal injury due to environmental pollution, including hazardous wastes. The statute-related cause of action that appears to be available in some jurisdictions is the use of a statutory violation as a breach of duty of care in a negligence action. One other statutory remedy available in some states is public nuisance.

(5) State Public Nuisance Statutes

Unless the private remedies under a state public nuisance standard have been preempted by a state environmental statute, or hazardous waste or solid waste statute, a plaintiff might be able to sue under a public nuisance statute. In order to do this, the plaintiff would have to show either that the statute expressly grants a private right of action for injury from a public nuisance or that the plaintiff has suffered a special, separate injury, different from that of the general public.

Appendix H, a survey of state public nuisance statutes, civil and criminal, shows that twenty-four states have statutorily granted a private right to recover damages for health-related public nuisances. [See Appendix H, at 18-19]. Some of the statutes, following common law doctrine, require the plaintiff to have suffered separate damages in order to recover for damages from a public nuisance. A few states have not created a statutory private right of action, but instead, have provided that abatement of a public nuisance does not preclude a private action at common law to recover damages. [See Appendix H, at 20].

Five states provide for a private action to abate a public nuisance, but not for damages. [See Appendix H, at 20].

Statutory Remedies: Condlusion

Statutes that provide a remedy for personal injury or damage to private property from any kind of environmental pollution are rare--only a few such statutes exist in the environmental public nuisance, hazardous waste and oil pollution fields, and their scope is very limited. Plaintiffs in most states, then, are not assured of a cause of action expressly provided by a statute. Neither are they assured of the availability of a remedy that is not expressly provided but that is based on a statutory violation. Various theories, including negligence per se, are available, but their application in hazardous waste cases appears uncertain. The plaintiff must rely primarily on state common law causes of action.

(B) State Common Law Remedies

Introduction

This portion of the Report will deal with the adequacy of available remedies, and with barriers to recovery in the traditional causes of action in negligence, trespass, nuisance and strict liability. It will examine the legal consequences of invasion of the plaintiff's property by hazardous wastes, and of the impact of the defendant's activities on the property of the plaintiff, as well as on his health. There are few common law cases that involve hazardous wastes, but reliance on analogous decisions is possible.

It should be noted here that there is a growing trend for states and municipalities to own or operate their own hazardous waste facilities.[199] In such cases, the Eleventh Amendment and the doctrine of sovereign immunity may present additional obstacles to a plaintiff pursuing common law remedies. For a discussion of these problems, see Appendix O.

(1) Negligence

The cause of action in negligence is clearly available as a remedy for personal injury and property damage arising out of exposure to hazardous wastes. A private action for negligence could arise out of the improper disposal of hazardous wastes, improper transportation of such wastes, the occurrence of spills caused negligently, and the negligent causation of hazardous surface water runoff or the negligent contamination of subsurface water.

Negligence requires a breach of a duty of due care. The Restatement (Second) of Torts defines negligence as "conduct which falls below the standard established by law for the protection of others against unreasonable risk of harm..."[200] Negligence thus deals with conduct, rather than conditions -- the defendant must be charged with having done some act, or failed to do some act he had a duty to undertake in a manner which violates a standard of care by negligence or recklessness.[201]

Thus, to establish a cause of action in negligence, it must be shown that defendant was under a duty to conform to a standard of conduct; that he breached the established duty; that there was a reasonably close connection between the conduct and the resulting injury -- i.e., that the conduct was the proximate cause of the injury; and that plaintiff suffered actual loss or damage.[202]

A duty of care or reasonable standard of conduct may be imposed by legislative enactment or administrative regulation, or may be implied by a court from such law or regulation; this subject has been discussed in another context.[203] Earlier judicial decisions may also establish a standard, and in the absence of more formal standards, the standard of conduct of a reasonable man under the given conditions and circumstances, will be determined by the triers of fact.[204]

Few plaintiffs rely solely on negligence for claims of injury from exposure to hazardous wastes, though a cause of action based on negligence is usually included in personal injury and property damage cases that also rely on trespass and strict liability.[205] Some courts in other environmental cases, including solid waste cases, have adopted the rule that all persons including transporters and disposers of deleterious substances are under a legal duty to use their properties and to dispose of their wastes in such a manner as to protect other persons and their property against unreasonable risks of injury and damage.[206]

Cases involving situations resulting from the negligent disposal of hazardous wastes include negligent discharges of saltwater onto plaintiff's land, resulting from oil drilling operations on defendant's property;[207] negligent discharges of natural gas;[208] negligent discharges of air and water pollution,[209] and the negligent contamination of subsurface waters.[210]

Frequently, in negligence cases of this kind, proximate cause is shown by evidence of a faulty instrumentality or inadequate method of disposal,[211] and by evidence of defendant's control of the instrumentality or method employed.[212]

A recurring issue in environmentally based negligence claims is the problem of multiple causation of injuries and the involvement of a number of defendants, contributing, though not acting in concert. The doctrine of joint and several liability and of other schemes to allocate responsibility has been discussed earlier.[213]

The use of negligence as a cause of action in hazardous waste situations may be difficult when the improper act of disposal took place many years ago and evidence may be difficult to produce. Moreover, another difficult factor to prove is that there was indeed a known risk and that in the distant past the disposer was aware of the risk. Indeed, even if the actor was aware of the risk, it may be impossible to prove it years later. It may be easier to rely on trespass or nuisance in private hazardous waste and other environmental pollution claims that involve runoff of liquid or invasion by other substances because neither of these will require proof of the difficult element of lack of due care.[214] These difficulties are demonstrated by the very few decided cases and by pending cases as well. For instance, in O'Leary v. Moyer's Landfill, Inc.,[215] the action against the operator of the landfill contained a claim for negligence for contamination of a creek and for permitting toxic substances to be deposited, which would then leak into surrounding water. The negligence claim was dismissed because no actual injury "as a legal consequence of the negligent landfill operation", could be shown. The plaintiff's action was sustained, however, on grounds that did not involve breach of duty or care.[216]

A more successful effort, Knabe v. National Supply Division of Armco Steel,[217] was based on negligence as well as intentional tort in failing to secure or take prompt remedial action in the prevention of discharge from a waste holding pond. Pending cases include complaints of negligent discharges of PCB and other hazardous substances into storage areas on plaintiff's property and into nearby creeks.[218]

(2) Trespass

The cause of action for trespass has some significant applications in pollution control, particularly in private actions involving air pollution and runoff of liquid wastes or contamination of percolating groundwater. However, the nature and characteristics of trespass make it less than a fully effective remedy in pollution cases and in cases involving injury or damage from hazardous

Trespass requires an interference with plaintiff's possessory interest in land -- an entry on plaintiff's land, either by defendant, or by some physical or observable object which defendant has caused to enter.

The definition of trespass reflects one reason it is of limited use in hazardous waste cases. A cause of action based on trespass protects only the interest in exclusive possession of the plaintiff's property and would not apply in two situations that might be common in hazardous waste litigation. If the plaintiff is not in possession of the property, he cannot sue in trespass,[219] and because trespass refers to invasion of property, trespass does not provide a remedy for injury unrelated to such an invasion.

As the law of trespass has developed in the United States, it has several other limitations that are obstacles to recovery in a hazardous waste case. A trespass must be intentional, negligent or result from an ultrahazardous activity;[220] the old common law rule of strict liability for trespass based on the fact of invasion alone has been virtually abandoned.[221] Another limitation exists in some jurisdictions that still distinguish invasions by visible or "tangible" matter from pollutants the presence of which can be proved only by scientific evidence.[222] Although the law is changing, some of the older approaches require such visible invasions to find trespass.[223] A limitation on the use of trespass which creates serious problems in hazardous waste cases involving contamination of percolating groundwater, is the American rule followed in most states, that a landowner is not absolutely entitled to pure percolating groundwater.[224] The landowner must show negligence on the part of the defendant; or that the defendant had knowledge that such contamination was likely to result from the defendant's activities, or that the defendant's activity was ultrahazardous.[225] Some courts would treat a cause of action based on negligence or ultrahazardous activity as entirely separate causes of action for negligence and strict liability, rather than for trespass,[226] in which case the considerations raised in the discussion of negligence and strict liability would be relevant. [See Appendices I and K, and pp. 84-87 supra and 92-94 infra.

For a trespass to have been intentional, the defendant must either have actually desired or willed the intrusion or have known that an invasion of the plaintiff's property was likely to occur. Except in a situation involving unauthorized "midnight dumping" on plaintiff's property, a plaintiff probably would not be able to show an actual will to intrude, unless the invasion had continued after the plaintiff had asked the defendant to cease the intrusion.[227]

Proving knowledge or reason to know that an invasion was substantially certain poses an obstacle similar to that posed in a negligence action: should the defendant at the time of dumping have known that the hazardous waste would pollute the plaintiff's property, as in Phillips v. Sun Oil Co.,[228] where trespass by leaking oil was charged.

Trespass by environmental pollution has increasingly merged with other causes of action, with negligence, as in the example cited, and with nuisance in air pollution cases. In spite of the procedural advantage that arises if a plaintiff is allowed to rely on a longer statute of limitations for trespass, a claim for trespass may be increasingly harder to prove. The theoretical advantage of trespass is most clearly demonstrated by the historical distinction between trespass and nuisance. Unlike the tort of nuisance, trespass has not required a balancing of the gravity of the harm against the social utility to the defendant or the degree of risk.[229] However, although few suits for trespass by pollutants have been reported, the trend in jurisdictions recognizing trespass for for "invisible" pollutants seems to be toward a balancing process even in trespass cases. For example, in Martin v. Reynolds Metals Co.,[230] the Oregon Supreme Court held that trespass could be an intrusion "by visible or invisible pieces of matter or by energy which can be measured only by the mathematical language of the physicist,"[231] but the court adopted a two-step test to determine when an invasion by such matter could be considered a trespass: (1) whether the intrusion has violated a legally protected interest of the plaintiff, (2) if so, whether the injury caused by the intrusion is of a sufficiently substantial nature.[232] The court recognized "[h]ere it is apparent that the law of trespass and the law of nuisance come very close to merging." [233]

However, if under this test a plaintiff could prove sufficiently substantial injury, trespass might still be a stronger claim than nuisance because even the newer approach does not require weighing the social utility of the defendant's activity.[234]

(3) Nuisance

(a) Private Nuisance

A private nuisance is an unreasonable interference with plaintiff's use and enjoyment of his land.[235] The action for private nuisance, which may seek injunctive relief as well as damages,[236] grows out of conditions that are disturbing and create harm in using the land.[237] Private nuisance actions are appropriate for the interference with use and enjoyment created by noise,[238] by odors,[239] and other air pollution,[240] by water pollution[241] and the contamination or pollution of subsurface waters.[242] The maintenance of a hazardous waste disposal site easily fits the decription of a private nuisance and the threat of personal discomfort or disease interferes with the use and enjoyment of property. Such a threat to health is an appropriate basis for enjoining a private nuisance for the future,[243] and Prosser states that "Once the invasion of the property interest is established...consequential damages to the possessor which result from it, such as injuries to his own health...may be recovered."[244]

A private nuisance action, however, is primarily a device to obtain injunctive relief for the future, or damages for past interference with the use of property.

In situations of nuisance involving environmental pollution, the cause of action for private nuisance often blends with the cause of action for trespass, because a continuing trespass, such as the continued invasion by particulate or gaseous air pollution, may be regarded as a nuisance.[245]

Liability for a private nuisance is often a form of strict liability, where the person who maintains a nuisance is said to be responsible regardless of fault or negligence.[246] The issue of the responsibility of the present landowner for conditions, or the nuisance, on his land, which he did not create in the first place is likely to recur in hazardous waste nuisances, and has been discussed earlier.[247]

The resolution of nuisance cases requires a balancing of the equities -- i.e., a weighing of the plaintiff's interest against the social and economic utility of the defendant's activities that cause the interference.[248] The generation of wastes may or may not be socially desirable, but waste disposal sites, whether or not hazardous, meet a substantial need, and the interference with plaintiff's use and enjoyment of property may not be considered unreasonable, thus adding to the difficulty of a nuisance claim.

In some jurisdictions, available defenses include "coming to the nuisance", where the location of the nuisance preceded the location of the plaintiff in the area.[249] However, it has been held repeatedly that the fact that the waste disposal site has a government permit is not a defense against a private nuisance action.[250] This is a point of increasing significance because virtually all active waste disposal sites currently must be under federal, state or local permit.

(b) Public Nuisance

In spite of the similarity in the name of public and private nuisance causes of action, the public nuisance is quite distinct in its historical origin. A public nuisance is generally based on the violation of a law which characterizes certain conditions as nuisance.[251] A public nuisance may also be more broadly defined as an unreasonable interference with a general right of the public.[252] Among tort law experts, there was at one time a lively disagreement on whether there could ever be a public nuisance without a crime or breach of law[253] -- a dispute which was resolved by the Restatement (Second) of Torts in favor of the broader, more inclusive definition.[254]

Because a public nuisance interferes with a public right, it is not tied to interference with enjoyment and of property.[255] Moreover, because it is an interference with a public right, it gives rise to an action or prosecution by the public prosecutor.[256]

Statutes which designate public nuisances may be very broad. Some states designate any unwholesome, dangerous, hazardous, or unsafe condition as an abatable public nuisance,[257] and such broad public health nuisance statutes, which may also provide for private action, have been previously discussed.[258]

Aside from special statutory authorizations of private lawsuits, a private plaintiff may sue for damages flowing from a public nuisance -- whether damages for personal injuries or damages to property -- only if his loss or injury differs in kind from that suffered by the general public.[259] What constitutes such a special injury has been a recurring issue.[260]

As a general proposition, proof of personal injury flowing from a public nuisance always gives plaintiff the special interest required to sue for a public nuisance.[261] This conclusion was reached in cases involving health and property damage from stagnant water released by defendant;[262] injury to health from noise;[263] injury to health from dust and odors from a dairy in a rural residential area;[264] death of a child by drowning in an improperly maintained dump;[265] damage to health from emissions of dust and lint from a factory;[266] and injury sustained falling into an excavation improperly maintained near a sidewalk.[267] However, where relatively minor injuries amounting to little more than discomfort are involved, recovery may be denied because these consequences are shared by the general public and are not sufficiently special to warrant a private action.[268]

As in the case of private nuisance claims, a government permit does not exculpate the defendant in cases involving claims of special injury, including injury from waste disposal sites.[269] Whether compliance with government regulations in maintaining such a permitted disposal site exculpates from liability has been discussed earlier.[270]

A private action for public nuisance is theoretically available for injuries from exposure to hazardous wastes. However, establishing the existence of the public nuisance and the presence of special injuries not shared by the general public will often be barriers to recovery, in addition to other common barriers: proof of causation, statute of limitations, and allocation and apportionment of liability.

(4) Strict Liability

Strict liability for injury due to hazardous waste would seem to be a viable theory for plaintiffs because of the dangerous nature of the activity of hazardous waste disposal. However, it is not at all clear that all states would impose strict liability for injuries from exposure to hazardous waste. [See Appendix K].

It is true, as Dean Prosser states, if one includes cases decided on a nuisance theory, the Rylands v. Fletcher principle[271] of liability regardless of fault for certain dangerous activities is "in reality universally accepted."[272] Widespread acceptance of the principle in theory has not meant uniform application of the principle due to two factors: first, courts rely on different formulations to determine what activities should be covered by the principle, and second, even courts referring to the same formulation apply it differently. This latter factor has resulted in a situation where often two opinions applying different formulations are more easily reconciled, than two opinions applying the same formulation.[273] This makes comparison of cases difficult.

Existing case law suggests that (1) strict liability is not absolute liability; defenses are available, and the application of strict liability for conducting dangerous activities yields to a number of other principles, and (2) strict liability for hazardous waste disposal would be more easily available if the focus of inquiry is on the nature of the activity rather than on the locale in which the activity was conducted.

Before examining alternative formulations of the strict liability doctrine, it is useful to consider the competing interests involved in imposing strict liability in a hazardous waste situation, and to examine these interests by analogizing the hazardous waste area to the product liability area.[274]

Analogy to Strict Product Liability

Product liability law developed to shift the burden of risks and costs of the injuries caused by defectively manufactured products to the industry creating the risks, and to encourage manufacturers to design and manufacture safe products. Similar reasons exist for the imposition of strict liability in hazardous waste cases.

Although product liability cases involve injury or damage caused by a defect in a known product produced by an identifiable manufacturer, other characteristics of product liability are similar to hazardous waste situations and the problems have been analogized by commentators.[275]

Strict liability is imposed in product liability to ease plaintiff's burden of proof, and on the grounds that imposition of liability on the manufacturer most readily and efficiently provides for cost internalization and for equitable distribution of the costs of product-caused injuries.

Similar, if not greater difficulties of proof are encountered in the case of injuries caused by hazardous wastes. As in product liability, strict liability for hazardous waste disposal may also encourage the reduction of risks by disposers. So, too, the distribution of costs of injury often may be easily passed on by imposing liability on parties such as the generator of the waste or the owner/operator of disposal sites who can spread the costs most easily, by purchasing liability insurance, or in the case of the disposal site owner/operator, by transferring them to the generator of wastes through disposal charges. The analogy to strict product liability can be most easily drawn in the "toxic tort" cases, where questions of scientific proof, long latency periods of disease, and high risk recur, whether the injury was caused by exposure to a chemical product or to toxic waste.

The New Jersey Superior Court in City of Bridgeton v. B.P. Oil, Inc.,[276] and in Dept. of Transportation v. PSC Resources, Inc.[277] recently analogized strict product liability to liability for storage of pollutants and pollution of a lake:

> While in New Jersey the concept of strict liability regardless of negligence has been developed in products liability cases, see Herbstman v. Eastman Kodak Co., 68 N.J. 1, 342A 2d 181 (1968), it has not yet been extended to tort cases such as the one at bar. As can be seen, however, there is a varying standard of care required in negligence cases, depending on the amount of danger involved in the activity engaged in. In the case at bar the activity,

> storage of oil, created a substantial risk, and defendant therefore had a high standard of care established by statute with the requirements for high standard because of inherent dangers involved in storage, defendant must be required to exercise an extremely high burden. As has been discussed, strict liability has been applied to products liability cases. In view of our developing insight into the impact of pollution upon environment because of the nature of this activity and the statutory prohibition against pollution, this is the proper time to extend the concept of strict liability in this State to those who store ultra-hazardous or pollutant substances. This means that a defendant becomes liable for damages caused to a proper plaintiff. This rule is in reality neither new nor novel. For generations it has been the common law rule that an owner of realty is required to refrain from injury to the land of his neighbor. "Sic utere tuo ut alienum non laedas" is older than "When in the course of human events...." 9 Coke 59 1 Blackstone, Commentaries 306; Harper and James, Law of Torts, §124 at 71 (1965).[278]

Despite the similarities between the two problems, the New Jersey decision reflects an early application of the rule, and it is not clear whether many courts are ready to extend the reasoning in product liability cases to hazardous waste cases.

Another characteristic of product liability law, which also exists in the area of strict liability for dangerous activities, is the presence of negligence-related considerations, "primarily that of forseeability."[279] The requirement of foreseeability of the harm in a strict liability suit for injury from hazardous wastes could present an insurmountable barrier for plaintiffs, raising problems of proof somewhat similar to those in a claim based on negligence. This raises, again, the importance of what factor is the major focus of inquiry in a strict liability case; the focus varies among the four formulations discussed below, each with different implications for cases of injuries resulting from hazardous waste.

Rylands v. Fletcher: Strict Liability for a "Non-natural" Use of Land

The doctrine of strict liability based on the theory that a condition or activity is abnormally dangerous because of its "non-natural" character is usually traced to the English case, Rylands v. Fletcher.

Under the principle developed since Rylands, the court determines whether an activity is "natural" by considering whether it is appropriate in the context of the place, and by reviewing the manner and relationship of the activity to its surroundings, not simply on whether or not the activity itself is ultrahazardous.

In Rylands v. Fletcher, decided in 1868, the defendants, mill owners, had constructed a reservoir upon their land. The water broke through and flooded the plaintiff's mine. Although the actual work was done by independent contractors and no negligence or trespass by the defendants was found, liability was imposed by analogy to the strict liability for trespassing cattle, dangerous animals and absolute nuisance. Rylands v. Fletcher, as limited by Lord Cairns's statement, stands for the principle that strict liability is imposed for a "non-natural" use of the defendant's land, as distinguished from "any purpose for which it might in the ordinary course of the enjoyment of land be used."[280] The criteria that the English courts have looked for, and which were accepted by American cases, are (1) the character of the thing or activity, and (2) the place and manner in which it is maintained and its relation to its surroundings.[281]

Because a strict liability theory based on Rylands does not rely solely on the dangerous character of the activity, but also on the appropriateness in the particular surroundings, the theory specifically involves a balancing of opposing interests. Courts also engage in balancing, however, even in cases decided under the "ultrahazardous" doctrine of the Restatement, thus blurring distinctions between the Restatement, on the one hand, and on the other, the Rylands theory and the Restatement (Second) "abnormally dangerous" test which is more akin to the Rylands approach.

First Restatement -- "Ultrahazardous Activity"

The initial Restatement's reliance on the "ultrahazardous" nature of the activity to justify the applications of strict liability was an apparent shift from the Rylands doctrine in that greater emphasis was placed on the dangerous nature of the activity itself, rather than on the appropriateness to the place where the activity was carried on.

Adopted in 1934, the first Restatement devotes chapter 21 to a discussion of "ultrahazardous activities" defined in §520 which states:

> An activity is ultrahazardous if it (a) necessarily involves a risk of serious harm to the person, land or chattels of others which cannot be eliminated by the exercise of utmost care, and (b) is not a matter of common usage.[282]

This definition emphasizes two factors: unavoidable risk and unusual usage. Ultrahazardous activities are distinguishable from nuisances or negligent activities because the ultrahazardous activity has sufficient utility; otherwise, incurring the risk would represent negligence as defined in §282 of the Restatement.[283]

Under the first Restatement, "one who carried on an ultrahazardous activity is liable to another whose person, land or chattels the actor should recognize as likely to be harmed by the unpreventable miscarriage of the activity for the harm resulting thereto from that which makes the activity ultrahazardous, although the utmost care is exercised to prevent the harm."[284] Thus, all injuries sustained because of the unique dangers of the ultrahazardous activity are the responsibility of the actor. The Restatement provides few defenses to a §519 action. One defense provided by §519 is "if the activity is carried on in pursuance of a public duty imposed upon the actor as a public officer or employee or as a common carrier"[285] Other defenses are:

> where the person harmed by the unpreventable miscarriage of an ultrahazardous activity has reason to know of the risk which makes the activity ultrahazardous and (a) takes part in it, or (b) brings himself within the area which will be endangered by its miscarriage.
> (i) without a privilege, or
> (ii)in the exercise of a privilege derived from the consent of the person carrying on the activity, or
> (iii) as a member of the public entitled to the services of a public utility carrying on the activity.[286]

Thus, a salesman who enters blasting grounds as a business invitee may not recover for any injuries he may sustain due to blasting.[287] On the other hand, a traveler on a public highway does not forfeit his right to recovery for harm done to him by the unpreventable explosion of dynamite which he knows is situated near the highway.[288]

A plaintiff is also barred from recovery in a §519 action if he is contributorily negligent by "intentionally or negligently caus(ing) the activity to miscarry, or (b) after knowledge that it has miscarried or is about to miscarry....fail(ing) to exercise reasonable care to avoid harm threatened thereby."[289] However, §524(1) specifically states that "(a) plaintiff is not barred from recovery for harm done by the miscarriage of an ultrahazardous activity caused by his failure to exercise reasonable care to observe the fact that the activity is being carried on or by intentionally coming into the area which would be endangered by its miscarriage."[290]

Not only is contributory negligence usually not a defense in a §519 action, but neither are the contributing actions of third persons, animals and forces of nature.[291] The underlying reason is that those who engage in ultrahazardous activities have, for their own purposes, introduced a risk which is not normally an incident to the ordinary life of the community.[292]

Restatement (Second) -- "Abnormally Dangerous"

The Restatement (Second)'s "abnormally dangerous" test adopted by the American Law Institute in 1976 reflected something of a return to the Rylands doctrine. Section 520 of the Restatement (Second) outlines factors that are important in determining whether an activity is abnormally dangerous:

> In determining whether an activity is abnormally dangerous, the following factors are to be considered:
>
> (a) existence of a high degree of risk and some harm to the person, land or chattels of others;
> (b) likelihood that the harm that results from it will be great;
> (c) inability to eliminate the risk by the exercise of reasonable care;
> (d) extent to which the activity is not a matter of common usage;
> (e) inappropriateness of the activity to the place where it is carried out; and
> (f) extent to which its value to the community is outweighed by its dangerous attributes.

However, analysis of no one factor is determinative. An activity which is abnormally dangerous under one set of circumstances is not necessarily abnormally dangerous on all occasions. In determining whether activities involving hazardous waste are abnormally dangerous, it is not necessary that each of the factors of §520 be present, particularly if others weigh heavily. It is clear, however, that considerations of the appropriateness to the place weigh heavily.

As in the first Restatement formulation, the strict liability of an operator of an abnormally dangerous activity does not extend to those who intentionally or negligently trespass, even though the trespasser has no reason to know that the activity is conducted there.[293]

Again, as in the first Restatement the contributing actions of third persons, animals and forces of nature will not relieve the operator of liability,[294] except, perhaps when the actions of the third party were deliberately intended to bring about the injury.[295] Nor will the contributory negligence of the victim,[296] except when the victim "knowingly and unreasonably subject[s] himself to the risk of harm from the activity..."[297]

In addition to continuing the first Restatement's defense that strict liability does not apply to activities carried out in pursuance of a public duty,[298] the Restatement (Second) has the additional defense of assumption of risk. The defendant must show that the victim knew of the danger and voluntarily accepted the risk of injury.[299] However, unlike earlier formulations, an operator will be strictly liable to persons coming upon the land in the exercise of a privilege if derived from his consent or otherwise.[300]

The primary characteristic of the Restatement (Second) test is an important one for complex hazardous waste litigation; the test encourages courts to approach the question of strict liability on a case by case basis.[301] This will complicate and prolong litigation and will involve a notion of duty of care.

Whenever a balancing of factors is required under a strict liability theory, a notion of duty of care, responsibility or fault is easily implied as to choice of location or means, and strict liability begins to sound more like negligence, giving rise to similar problems of proof. So, for instance, in Doundoulakis v. Town of Hempstead,[302] the New York Court of Appeals, per Breitel, C.J., indicated that to establish a proper case for strict liability under the Restatement (Second), in addition to showing that hydraulic landfilling under the circumstances posed grave risks, the plaintiff would have to submit evidence as to the availability and cost of alternative methods:

> It is not insignificant that alternative methods, perhaps more time-consuming and expensive, but less dangerous, might have been available to defendants...[303]

The Court of Appeals cited the Second Restatement's criteria as particularly useful in weighing the numerous factors involved.[304]

Although the balancing emphasis in the Restatement (Second) "abnormally dangerous" test is theoretically different from the initial Restatement's "ultrahazardous" test, the distinction is not always clear in opinions applying either Restatement. California applies the ultrahazardous test,[305] yet strict liability has been applied to blasting in a developed area,[306] but not to blasting in a deserted one.[307]

However, although the distinction between the two Restatements may be blurred in the opinions, a real distinction in emphasis exists. For example, in McLane v. Northwest Natural Gas Company,[308] the Supreme Court of Oregon specifically disapproved the language in an earlier Oregon case[309] to the effect that in a blasting case the character of the locality in which the blasting was carried on was not material. The Court noted that the language in the earlier case apparently was based on the first Restatement §520.[310]

Strict Liability Based on Magnitude of the Risk

A recent formulation used by a New Jersey Court did not rely on either of the Restatements. Instead, the court in New Jersey v. Ventron Corp.[311] focused on the magnitude of the risk created by the activity, thus extending the Rylands "common law principle of strict liability for unleashing a dangerous substance during non-natural use of land."[312]

The trial court had concluded that a series of owners of a mercury processing plant were strictly liable for pollution of an adjacent creek under the common law and by statute.[313] The pollution had begun in 1929. Defendants were not liable for negligence, because their conduct was "reasonable in light of the state of knowledge as it then existed" but the defendants were liable on a "determination that the manufacturer....of products utilizing chemicals or other pollutants which may cause harm if they escape into the environment should subject the producer to strict liability, irrespective of reasonable care, if in fact environmental pollution occurs."[314]

This test is more liberal than even the first Restatement's "ultrahazardous" test which requires a consideration of the foreseeability of the harm, both as to the type of harm and class of persons injured. The theory used in Ventron Corp. seems justified because hazardous waste disposal is different from the activities to which traditional strict liability is applied. The risks from hazardous waste disposal may differ in kind from the risks created by blasting, which is the best example of an ultrahazardous activity under the first Restatement; certainly, the risks differ in degree. It is likely that hazardous waste disposal--wherever the place of disposal--always entails some damage to the environment or humans, thus leaving only the question of how much damage will occur. Strict regulation of hazardous substances can reduce but not eliminate all hazards. The question is what principle of liability should apply to an activity which is permitted by society, which always creates some damage, and which results in economic benefit primarily for parties other than those injured.

Strict Liability: Conclusion

All formulations of strict liability for a dangerous activity deal with the question of whether a person who conducts an activity which entails serious risks -- even if carried on with reasonable care -- should be held strictly liable for the consequences.

The crucial distinction to be made is whether a formulation, or a court's application of it, focuses on the nature of the activity, or instead, involves a balancing of several factors such as the utility of the activity and appropriateness to the locale. Many of the courts balance several factors, even those courts citing the Restatement's "ultrahazardous" test. Factors that reflect consideration of negligence play a role under both Restatements.

Like strict product liability, strict liability in hazardous waste cases may spread costs through insurance and disposal fees instead of imposing them on the injured party. The principle on which strict environmental liability rests recognizes the inevitability of some damage to the environment from activities such as hazardous waste disposal which should be paid for by those who economically benefit from the polluting activity and who are in the best position to reduce or eliminate the risks.

A final consideration should be added. Although formulations of the strict liability approach offer an opportunity for the recovery of damages for personal injury and private property damage, they do not resolve the problem of causation -- i.e., the problem of proof, discussed earlier, of the causal connection between the defendant's dangerous activity and the injury of the plaintiff.

3. Available Causes of Action for Damage to Private Property and Environmental Interests

In general, the same causes of action are available for actions for property damage as have been discussed with relation to personal injury. Federal legislation, notably CERCLA §107, does not provide for damages for loss or injury to private property, though it does provide for damages, including remedial action, "to the United States Government and to any State for natural resources within the State or belonging to, managed by, controlled by, or appertaining to such state."[315] CERCLA makes no provision for private damage claims, and RCRA does not provide for such claims either. However, the Post Closure Liability Trust Fund under CERCLA is available to compensate such damage in limited circumstances, and regulations promulgated under RCRA require evidence of financial responsibility, including insurance, from owners and operators of hazardous waste disposal facilities. The liability insurance, if insurers provide it as specified in the regulations, would cover claims for personal injury and property damage[316] resulting from most accidental occurrences.

State legislation, discussed earlier with reference to personal injury claims, provides almost as limited coverage for damage to property as it does for personal injury.[317] There is a possibility, in a few states, to collect damages under public health nuisance statutes,[318] and under state oil spill legislation.[319] Under the latter statutes, claims have been made successfully for damage to fishing interests.[320] In general, what is true for personal injury claims also applies to claims for property loss or damage--there is virtually no possibility of an effective private action for damages brought on the basis of a federal pollution control statute.[321]

The usual common law causes of action are available for property damage and economic loss. Successful actions for trespass and nuisance have been brought for damage to private property based on air pollution.[322] So, too, water pollution, which has caused damage to land, crops and livestock, has been the basis for recovery in actions for negligence[323] and riparian rights.[324] Recoveries have also been obtained in actions for nuisance and negligence in cases involving the contamination of subsurface waters.[325] Strict liability has been the basis for recovery in cases involving water pollution by oil or hazardous wastes.[326]

It should be noted that certain common law causes of action are addressed specifically to interference with property rights. Trespass is primarily designed to deal with interferences or invasions of possessory interest in land,[327] and the cause of action for a private nuisance deals with interference with the use and enjoyment of private property. A private action to collect damages for a special injury suffered as a result of a public nuisance, however, may be the basis for recovery of damages for personal injury as well as to property.[328]

Damages and Other Remedies

Damages for injury or loss of property are generally easier to ascertain and calculate than damages for personal injury or disability. Environmental injury to property resulting from pollution may either be short-term or permanent. In short-term injuries that involve the destruction of a crop or of livestock, damages depend on the valuation of the crop, of the herd, or of such permanent resources as the trees in an orchard.[329] The issue is no different whether cows die from negligent runoff of chromic acid from a spray paint operation,[330] or whether horses die from exposure to PCB-soaked sawdust in a riding school.[331] In both instances, there are problems of valuation, and there are issues relating to the cause of death of the animals which are analogous to questions of causation of human disease, but the consequences are easier to calculate, and the lawsuits, on the whole, involve fewer complexities.

Property damage of a more permanent nature creates greater problems in determining damages. When the injury to real property is long-term or permanent, damages will be measured by the permanent reduction in market value which the contamination may have caused.[332] This rule will apply to agricultural land which has been rendered unproductive or which can no longer be used safely for the production of crops. The rule will also apply to real estate that has been rendered uninhabitable, as in the case of homes in Love Canal.[333]

Other problems relating to damages occur in cases involving private nuisances. When a private nuisance interferes with the use and enjoyment of property, the available remedies include damages for past injuries and injunctive relief to prevent future interferences. Injunctive relief generally requires a balancing of equities -- weighing of the plaintiff's interest against the social and economic value of the defendant's activity that would need to be enjoined.[334] In the case of continuing trespasses or nuisances, some jurisdictions have denied injunctions and have developed a remedy of permanent damages, measured by the permanent reduction in the value of the property in the light of the continuation of the nuisance. In effect, the plaintiff receives the amount reflecting the reduced market value as permanent damages, but is then burdened with a continuing servitude on his property. This approach, severely criticized as a form of private inverse condemnation, was followed in Boomer v. Atlantic Cement Company,[335] where the New York Court of Appeals decided, weighing the comfort of the plaintiffs against the economic welfare of the community, that the continuing control of an economically important industry should not be left to private litigation but to the state's regulatory agencies. Permanent damages for the reduction of property values have also been issued in less persuasive situations, as in a case involving an odor nuisance in a semi-rural neighborhood.[336]

Conclusion

This review of existing causes of action and barriers to recovery has shown that although causes of action do exist for some plaintiffs under some circumstances, a private litigant faces substantial substantive and procedural barriers in an action to recover damages for personal injury or property damage due to hazardous wastes, particularly where the individual claims are relatively small.

A private litigant must rely on state law, and primarily on state common law. Statutory remedies are rare, especially for personal injury. Rather than creating causes of action for personal injury and property damage, most state statutes aim at providing some assurance of owner or operator solvency, adequate to cover claims for property damage. The mechanisms are usually statutorily created funds and legislative requirements for insurance or bonding.

A private litigant, therefore, must turn to the state common law to find a useful cause of action, probably one or more of four: negligence, trespass, nuisance, and strict liability.

The Study Group has concluded that a prospective strict liability theory is the most appropriate theory for a private litigant, but that even strict liability, as it has developed, has certain limitations. Common law strict liability, as generally applied, involves balancing and notions of fault that create substantial barriers to plaintiffs' recovery in complex hazardous waste cases.

Certainly, causes of action are theoretically available to hazardous waste claimants, but the difficulty for recovery for valid claims is magnified by procedural barriers and cost of litigation. These may prevent recovery even by plaintiffs with large claims, and will discourage litigation by claimants with relatively small claims. Claimants with smaller claims are particularly discouraged by barriers to easy joinder of claims. Liberal application of joinder rules at the behest of either plaintiffs or defendants could significantly lower transaction costs.

Regardless of the size of a claim and the cause of action on which a claim is based, three recurring problems stand out as major barriers to recovery: statutes of limitation, proof of causation, and apportionment of damages among multiple defendants.

These barriers exist in claims for both property damage and personal injury, but such barriers are especially troublesome in personal injury actions. Hazardous waste litigation can involve plaintiffs who have been injured by multiple exposures to many different substances that have been generated, disposed of, and maintained by multiple defendants. To further complicate the problem, personal injuries are often latent for many years.

The three barriers can be removed, or at least decreased, where appropriate. States can reduce the statutes of limitation barrier by adopting a discovery rule, if they have not done so already.

The causation and apportionment problems are more difficult to solve. Proof of causation in an action for injury from hazardous wastes requires complex medical and scientific evidence. Although increasingly more is becoming known about the nature of the risks, causation issues remain formidable problems. Unless new means evolve in this area for marshalling such evidence in a scientifically credible but significantly less costly way, the causation barrier is likely to remain substantial.

Plaintiffs who are willing to undertake the major costs of litigation, would be aided substantially by an easing of plaintiffs' burdens in regard to causation, apportionment of damages, and statutes of limitation. However, persons with smaller claims are unlikely to recover at all unless further steps are taken to reduce both legal and economic barriers to their recovery, so as to facilitate their assertion of valid but difficult claims. This supplies the basis for the Tier One compensation remedy recommended by the Study Group in Part IV of the Report.

PART IIIA—NOTES

1. CERCLA ("Superfund") §107(i), 42 U.S.C. §9607(i), referring to 7 U.S.C. §136, excepting damages for normal pesticide field applications.

2. Superfund §§103, 107, 42 U.S.C. §§9603, 9607.

3. For discussion of related issues see McGovern, *Toxic Substances Litigation in the Fourth Circuit*, 16 U. RICHMOND L. REV. 247 (1982).

> Probably the most fruitful areas of future litigation concerning statutes of limitation and statutes of repose will involve a host of ingenious attempts by plaintiffs' attorneys to circumvent these statutory bars. Efforts will be made to find more favorable forums, either federal or state. More attention will be devoted to both statutory and common law provisions such as incapacity, fraudulent concealment or estoppel to toll these statutes. Plaintiffs will seek to narrow the applicability of statutory bars by urging definitions of terms that allow more flexibility. New defendants and new concepts of plaintiffs and damages will arise. [citations omitted]

4. Thirty-nine jurisdictions have adopted the discovery rule. Some have done this by statute. *See* Ala. Code §6-5-500 (1979); Conn. Gen. Stat. Ann. §52-584 (Supp. 1982); Kan. Stat. Ann. §60-513(a)(4) (1976); Mo. Ann. Stat. §516.120(4) (Vernon 1952); N.C. Gen. Stat. §1-52(5) (1969); Ohio Rev. Code§2305-10 (1980); S.C. Code §15-3-535 (Supp. 1980); Vt. Stat. Ann. tit. 12, §518(a) (1973). Other states have adopted the rule by judicial interpretation. *See* Austin v. Fulton, 444 P. 2d 536 (Alaska 1968); Sato v. Van Denburgh, 123 Ariz. 225, 599 P. 2d 181 (1979); Schenebeck v. Sterling Drug, Inc., 423 F.2d 919 (8th Cir. 1970) cited with approval in Midwest Mutual Insurance Co. v. Arkansas National Co., 260 Ark. 352, 357, 538 S.W. 2d 574, 577 (1976); Warrington v. Charles Pfizer and Co., 274 Cal. App. 2d 564, 80 Cal. Rptr. 130 (1969); Owens v. Brochner, 172 Colo. 525, 474 P. 2d 603 (1970); Burns v. Bell, 409 A.2d 614 (D.C. 1979); Oakes v. Gilday, 351 A.2d 85 (Del. Super. Ct. 1976); City of Miami v. Brooks, 70 So. 2d 306 (Fla. 1954); Forgay v. Tucker, 128 Ga. App. 497, 197 S.E. 2d 492 (1973); Yoshizaki v. Hilo Hospital, 50 Haw. 150, 433 P.2d 220 (1967); Withrell v. Weimer, 77 Ill. App.3d 582, 396 N.E. 2d 268 (1979); Louisville Trust Co. v. Johns-Manville Products, 580 S.W. 2d 497 (Ky. 1979); Corsey v. State Dept. of Corrections, 375 So. 2d 1319 (La. 1979); Williams v. Ford Motor Co., 342 A.2d 712 (Me. 1975); Harig v. Johns-Manville Products, 284 Md. 70, 394 A.2d 299 (1978); Cannon v. Sears, Roebudk & Co., 374 Mass. 739, 374 N.E. 2d 582 (1978); Connelly v. Paul Ruddy's Co., 388 Mich. 146, 200 N.W. 2d 70 (1972); Dalton v. Dow Chemical Co., 280 Minn. 147, 158 N.W. 2d 580 (1968); Interstate Mfg. Co. v. Interstate Products Co., 146 Mont. 449, 408 P.2d 478 (1965); Johnson v. St. Patrick's Hospital, 148 Mont. 125, 417 P.2d 469 (1966); Grand Island School District #2 v. Celotex Corp., 203 Neb. 559, 279 N.W. 2d 603 (1979); Raymond v. Eli Lilly & Co., 177 N.H. 164, 371 A.2d 170 (1977); Lopez v. Sawyer 62 N.J. 267, 300 A.2d 563 (1973);

Williams v. Borden, Inc., 637 F.2d 731 (10th Cir. 1980) (Oklahoma law); Adams v. Oregon State Police, 289 Or. 233, 611 P.2d 1153 (1980); Schaffer v. Larzelere, 410 Pa. 402, 189 A.2d 267 (1963); Teeters v. Currey, 518 S.W.2d 512 (Tenn. 1974); Thrift v. Tenneco Chemicals, Inc., Heyden Division, 381 F.Supp. 543 (N.D. Texas 1974); Ohler v. Tacoma General Hospital, 92 Wash. 2d 507, 598 P.2d 1358 (1979); Morgan v. Grace Hospital, Inc., 149 W. Va. 783, 144 S.E.2d 156 (Ct. App. 1965); Duke v. Housen, 589 P.2d 334 (Wyo. 1979), *reh. den.* 590 P.2d 1340, *cert. denied* 444 U.S. 863 (1979).

5. Ala. Code §6-5-502 (Supp. 1979).

6. Ala. Code §6-2-30(b) (1981 Supp.). *See also* Ohio Rev. Code §2305-10 (1981 Cum. Series G)(injury caused by exposure to asbestos or chromium).

7. N.D. Cent. Code. §28-01.1-02 (1981 Supp.); S.D. Cod. Laws. Ann. §15-2-12.1 (Supp. 1981).

8. *See* Idaho Code §5-219 (Bobbs-Merrill 1979) and Owyhee County v. Rife, 100 Idaho 91, 593 P.2d 995 (1979); Va. Code §8.01-243(A) (1980) and Hawks v. Dehart, 206 Va. 810, 146 S.E.2d 187 (1966). *See* Thornton v. Roosevelt Hospital, 47 N.Y.2d 780. *But see* McKee v. Johns-Manville Corp., 94 Misc. 327, 404 N.Y.S.2d 814 (1979) (discovery rule applicable in strict product liability cases, though not in negligence cases). *See also* Alberts v. Giebink, 299 N.W.2d 454 (1980); Austin v. Fulton, 444 P.2d 536 (Alaska 1968) (applicable to Virgin Islands law); Peterson v. Roloff, 57 Wis. 2d 1, 203 N.W.2d 699 (1973).

9. *See, e.g.*, McKee v. Johns-Mansville Corp., 94 Misc. 2d 327, 404 N.Y.S.2d 814 (1978); Locke v. Johns-Mansville Corp., 275 S.E.2d 900 (1981).

10. *See* Miss. Code Ann. §15-1-49, Wilder v. St. Joseph's Hospital, 225 Miss. 42 (1955) and Ford Motor Co. v. Broadway, 374 So. 2d 207 (Miss. 1974); Nev. Rev. Stat. §11.190 (4)(e) (1979), Palludan v. Bergin, 78 Nev. 441, 375 P. 2d 544 (1962) and Sorenson v. Pavlikowski, 94 Nev. 440, 581 P.2d 851 (1978); N.M. Stat. Ann. §37-1.8 (1978) and N.M. Electric Service Co. v. Montaney, 89 N.M. 278, 551 P.2d 634 (1976); N.D. Cent. Code §§28-01-16(5), 28-01.1-02 (1979) and Keller v. Clark Equipment Co., 474 F.Supp. 966 (D.N.D. 1979); R.I. Gen. Laws §9-1.14 (Cum. Supp. 1980), Romano v. Westinghouse Electric Co., 114 R.I. 451, 366 A.2d 555 (1975) and Von Willas v. Williams, 117 R.I. 309, 366 A.2d 545 (1976); Utah Code Ann. §78.12-25(2) (1977), Smoot v. Hydra Flame Corp., 522 P.2d 709 (Utah 1974), and Foil v. Ballinger, 601 P.2d 144 (Utah 1979).

11. In many states a generator or disposer would be liable for improper disposal by an independent contractor on the theory that the disposal of hazardous waste is an inherently or intrinsically dangerous activity, unless the generator or disposer has exercised an especially high degree of care in selecting, instructing and, in some cases, supervising the contractor. *E.g.*, Ewell v. Petro Processors of Louisiana, 364 So. 2d 604 (La. Ct. App. 1978); *cf.* Langan v. Valicopters, Inc., 567 P.2d 218 (Wash. 1977)(crop dusting case). The degree of care is higher in activities involving abnormally dangerous activities than in other cases, but "abnormally dangerous" can mean a lower degree of hazard than

that required in determining whether the activity is ultrahazardous and whether strict liability should be imposed. *See, e.g.*, Sanders v. Beckwith, 79 Ariz. 67, 283 P.2d 235 (1955), S.A. Gerrard Co. v. Fricker, 42 Ariz. 503, 27 P.2d 678 (1933); Annot., 37 A.L.R.3d 833, 840-41.

12. Restatement (Second) of Torts §373 (1965).

13. *Id.* at §840A (1979).

14. *See,* Merrick v. Murphy, 83 Misc. 2d 39, 371 N.Y.S.2d 97 (Sup. Ct. 1975) (negligence of former owner for creation and maintenance of condition); New Jersey v. Ventron Corp., No. C-2996-75 (Super. Ct., ch. Div. Bergen County, August 27, 1979), *aff'd, modified and remanded,* 182 N.J. Super. 210 (App. Div. 1981), *infra* note 303 (strict liability for clean-up imposed on generators for non-negligent escape of hazardous waste); New Jersey v. Exxon, 151 N.J. Super. 464, 376 A.2d 1339 (Sup. Ct. ch. Div. 1977) (refusing to impose liability for nuisance on subsequent owner): Ginsberg and Weiss *infra* note 273 at 885 and sources cited therein at note 107 (authors state that "law is clear that landowners who have tortiously created or maintained an artificial condition on their land, which becomes a nuisance to surrounding residents, cannot escape liability by conveying the offending property.")

15. Cal. Civ. Code §3483 (West 1980); Idaho Code §52-109 (Bobbs-Merrill 1981); Mont. Code Ann. §27-30-105 (1979); M.D. Cent. Code §42-01-13 (Smith 1979); Okla. Stat. Ann. tit. 50 §5 (West 1980); S.D. Code Ann. §21-10-8 (Smith 1980); Va. Code §48-3 (1980); Wash. Rev. Code Ann. §7.48.170 (West 1980).

16. Cal. Civ. Code §3483 (West 1980).

17. *See, e.g.*, City of Turlock v. Bristow, 103 C.A. 750, 284 P.962 (1930) (owner of irrigation ditch liable for not abating health and safety hazards caused by ditch's previous owner and builder), Brose v. Twin Falls Land and Water Co., 24 Ida. 266, 133 P. 673 (1913) (owner of canal may not defend action for damages or abatement on the ground that he did not create it but he is not liable for damages incurred previous to his purchase). *But see* Reinhard v. Lawrence Warehouse Co., *infra* note 18.

18. *See, e.g.*, Reinhard v. Lawrence Warehouse Co., 41 C.A.2d 741, 745-746, 107 P.2d 501, 504-505 (1941); Grigsby v. Clear Lake Water Works Co., 40 C. 396 (Calif. 1870); Daniels v. St. Louis & S.F.R. Co., 36 Okl. 421, 128 P. 1089, Okl. (1913); Great Northern R. Co. v. Oakley, 135 Wash. 279, 237 P. 990 (Wash. 1925).

19. *See, e.g.*, Restatement Second of Torts §§366, 839; PROSSER, TORTS (4th ed. 1971), at §64, pp. 414-415. *See also, Liability for Clean-up of Inactive Hazardous Waste Disposal Sites,* in HAZARDOUS WASTE LITIGATION at 76-79 (Practising Law Institute, Mott ed. 1981).

20. PROSSER, *id.* at §64, pp. 414-415.

21. *Id.*

22. *Id.* at 415.

23. 35 Pa. Commw. Ct. 443, 387 A.2d 142 (1978); *aff'd sub nom* National Wood Preservers v. Commonwealth, 489 Pa. 221, 414 A.2d 37 (1980); *appeal dismissed*, 449 U.S. 803 (1980). *See also* Commonwealth v. Wyeth Laboratories, 315 A.2d 640 (Pa. 1974).

24. The Pennsylvania Supreme Court dismissed the State's appeal, which was not timely filed, of the lower court's decision for Shell. 489 Pa. at 227, note 8, 414 A.2d at 40 note 8.

25. *Id*. at 45-46.

26. This interpretation of joint and several liability under CERCLA is subject to some dispute. For example, Reilly Tar & Chemical Corporation reads the Act in the same way, such that "only claims against private parties which are assertable under Superfund are those which may be asserted against the Fund pursuant to §111." Reply Memorandum for Reilly Tar & Chemical Corporation in Response to the Supplemental Memoranda in Opposition of Plaintiff United States of America and Intervenors State of Minnesota and City of St. Louis Park, United States et al. v. Reilly Tar & Chemical Corp. et al., No. 4-80-469, Hazardous Waste L.R. 2,046, 2,047 (Feb. 16, 1982). The State of Minnesota, however, finds Reilly Tar's interpretation "strained and erroneous." Plaintiff-Intervenor State of Minnesota's Statement of Points and Authorities in Opposition to the Defendant Reilly Tar & Chemical Corporation's Motion to Dismiss the State's Amended Complaint in Intervention (Superfund Memorandum), Dec. 28, 1981, at 14-19. Minnesota contends that §107 liability is not tied to the authorized uses of the Superfund. Under this reading, issues of joint and several liability might well arise in other than a subrogation context.

27. Prosser, *supra* note 19, at §41, p. 241.

28. *See, e.g.*, the facts surrounding the Philadelphia Chewing Gum Corp. case, discussed in the text accompanying note 23 *supra*.

29. Rodberg, *Apportionment of Damages in Hazardous Waste Litigation* in HAZARDOUS WASTE LITIGATION, *supra* note 19, at 183, 212 (1982).

30. PROSSER, *supra* note 19, §§46-52, pp. 291-323.

31. Gray v. U.S., 445 F.Supp. 337 (S.D. Tx. 1978).

32. McCreery v. Eli Lilly & Co., 87 Cal. App. 3d 77, 150 Cal. Rptr. 730 (Ct. App. 1978).

33. Namm v. Frosst, 178 N.J. Super. 19, 427 A.2d 1121 (Sup. Ct. App. Div. 1981).

34. The courts have placed the burden of proof on the defendant by relying on theories of market share liability, alternative liability, and concert of action. Sindell v. Abbott Laboratories, 26 Cal. 3d 588, 607 P.2d 1924, 163 Cal. Rptr. 132 (1980), Abel v. Eli Lilly and Co., 94 Mich. App. 59, 289 N.W. 2d 20 (Ct. App. 1979), Bichler v. Eli Lilly and Co., 79 N.Y. App. 317, 436 N.Y.S.2d 625 (App. Div. 1981). *aff'd* N.Y. Ct. App., May 11, 1982.

35. Section 876, Caveat, Comment on Caveat, f. Illustrations 15 and 16.

36. Restatement (Second) of Torts §876(a) (1979).

37. *Id.*, Comment on Clause (a).

38. *Id.*, Comment on Clause (a) and Illustrations.

39. Lyons v. Premo Pharmaceutical Labs, Inc., 170 N.J. Super. 183, 193, 406 A.2d 185, 190 (Sup. Ct. App. Div. 1979).

40. Abel v. Eli Lilly & Co., 94 Mich. App. 59, 289 N.W. 20 (Ct. App. 1979).

41. Restatement (Second) of Torts §433B(3) (1965).

42. 33 Cal. 2d 80, 199 P.2d 1 (1948).

43. Restatement (Second) of Torts §433B, Comment f.

44. Huddel v. Levin, 537 F.2d 726, 746 (3rd Cir. 1976).

45. An analogy can be made to automobile crashes involving multiple defendants. The injury suffered by the plaintiff is often theoretically divisible, but in practice, is impossible to divide. Courts have shifted the burden of apportioning the damages onto the defendants. *See* 100 A.L.R. 2d 16 §9(a), 59-61; Fugue v. Pierce, 5 Wash. App. 592, 597-99, 490 P.2d 132, 135-36 (Ct. App. 1971).

46. *See* Senate Comm. on Environment and Public Works, 96th Cong., 2d Sess., *Report on Six Case Studies of Compensation for toxic Substances Pollution: Alabama, California, Michigan, Missouri, New Jersey and Texas*, 491 (Comm. Print 1980). The authors found that four of the six jurisdictions surveyed would probably hold that the party suffering such theoretically divisible injuries has the burden of allocating responsibility among the dischargers.

47. 493 F.2d 1076 (5th Cir. 1974).

48. *See* Landers v. East Texas Salt Water Disposal Co., 151 Tex. 251, 248 S.W.2d 731 (1952); Phillips Petroleum Co. v. Hardee, 189 F.2d 205 (5th Cir. 1951).

49. Namm v. Frosst, 178 N.J. Super. 19, 31-32, 427 A.2d 1127 (Sup. Ct. App. Div. 1981).

50. *See* Sindell v. Abbott Laboratories, 26 Cal. 3d 588, 602, 607 P.2d 924, 930-31, 163 Cal. Rptr. 132, 138-39 (1980).

51. 345 F. Supp. 353 (E.D.N.Y. 1972).

52. Id. at 377.

53. Id. at 378. A number of legal commentators offer similar explanations of enterprise liability. Instead of placing liability on the party (plaintiff or defendant) "best able to distribute the costs of the risk," these commentators would place liability on the party who is the cheapest cost avoider. See, e.g., Calabresi and Hirschoff, Toward a Test of Strict Liability in Torts, 81 YALE L.J. 1055, 1056 (1976).

54. 345 F. Supp. at 382, 386. The court's discussion of enterprise liability was necessarily dicta since further briefs on choice of law problems were required. For purposes of the opinion, the court assumed the existence of a national body of tort law.

55. Id. at 386.

56. Id. The actions in this case, Chance v. DuPont, were later severed and transferred to the federal district court's setting in the districts where the accidents occurred. See Sindell v. Abbott Labs., 163 Cal. Rptr. 132, 607 P.2d 924, 934 n. 22 (1980).

57. Id. at 378.

58. Id. at 379.

59. Id. at 374, 1 FRUMER & FRIEDMAN, PRODUCTS LIABILITY, §5.04 (1970 rev.).

60. 345 F. Supp. at 379; Comment, DES and a Proposed Theory of Enterprise Liability, 46 FORDHAM L. REV. 963, 995 (1978).

61. See Comment, DES and a Proposed Theory of Enterprise Liability, Id. at 1002.

62. Note, Allocating the Costs of Hazardous Waste Disposal, 94 HARV. L. REV. 584, 586 (1981).

63. See note 2, supra.

64. 26 Cal. 3d 588, 607 P.2d 20, 163 Cal. Rptr. 132 (Ct. App. 1979). The court in Sindell gave several reasons for rejecting the theory in the case before it: (1) the large number of producers involved, (2) the absence of allegations that the dependents jointly controlled the risk and (3) the presence of pervasive government regulation and no showing that the industry practice was contrary to those regulations. 26 Cal. 3d at 609, 607 P. 2d at 935, 163 Cal. Rptr. at 143. In regard to the latter point, the court noted that while adherence to such standards would not absolve a manufacturer of liability to which it was otherwise subject, imposition of liability would be unfair upon a manufacturer for injuries resulting from the use of a drug which it did not supply. Id.

65. Abel v. Eli Lilly & Co., 94 Mich. App. 59, 77, 289 N.W. 2d 20, 32-33 (Ct. App. 1979).

66. Namm v. Frosst, 178 N.J. Super. 19, 34-35, 427 A.2d 1128, 1129 (Sup. Ct. App. Div. 1981).

67. Hall, 345 F. Supp. at 378.

68. Sindell v. Abbott Laboratories, 26 Cal. 3d 605, 607 P.2d 933, 163 Cal. Rptr. 140 (1980).

69. *See* text accompanying notes 32-36 *supra*. The court also questioned the authority of Hall and found it determinative that Hall involved an industry with only six manufacturers, while DES marketing in California was conducted by over two hundred drug companies.

70. 26 Cal. 3d at 609, 607 P.2d at 935, 163 Cal. Rptr. at 143. *See* note 60 *supra*.

71. 163 Cal. Rptr. at 145, 607 P. 2d at 937.

72. 24 Cal. 2d 453, 467-468, 150 P. 2d 436, 443 (1944).

73. 163 Cal. Rptr. at 145, 607 P. 2d at 936.

74. See dissenting opinion in Sindell, 26 Cal. 3d 588, 614, 607 P. 2d 924, 938, 163 Cal. Rptr. 132, 146 (1980), citing Coggins, *Industry-wide Liability*, 13 SUFFOLK L. REV. 980 (1979); Gray v. United States, 445 F. Supp. 337 (S.D. Tex. 1978); Ryan v. Eli Lilly & Co., 514 F. Supp. 1004 (D.S.C. 1981); Mizell v. Eli Lilly & Co., 526 F. Supp. 589 (D.S.C. 1981); Newcomb, *Market Share Liability for Defective Products: An Ill-Advised Remedy for the Problem of Identification*, 76 NORTHWESTERN L. REV. 300 (1981); Fischer, *Products Liability - An Analysis of Market Share Liability*, 34 VAND. L. REV. 551 (1981).

75. Sindell, 26 Cal. 3d at 614, 607 P. 2d at 939, 163 Cal. Rptr. at 146.

76. *See* *In re Northern District of California "Dalkon Shield" IUD Products Liability Litigation*, 521 F. Supp. 1188 (N.D. Cal. 1981); Note, *Mass Accident Class Actions*, 68 CAL. L. REV. 1615, 1625 (1972); Comment, *Consolidation in Mass Tort Litigation*, 30 U. CHI. L. REV. 373 (1963).

77. *See, e.g.*, Maryland *ex rel* Gliedman v. Capital Airlines, Inc., 267 F. Supp. 298 (D. Md. 1967) (dictum); U.S. v. United Airlines, Inc., 216 F. Supp. 709 (E.D. Wash. and D. Nev. 1962), *aff'd sub nom* United Airlines, v. U.S., 379 U.S. 951 (1964); Hart v. American Airlines, Inc., 61 Misc. 2d 411, 304 N.Y.S.2d 810 (Sup. Ct. 1969) for cases where offensive use of collateral estoppel was permitted. But *compare* Berner v. British Commonwealth Pacific Airlines, Ltd., 346 F.2d 532 (2d Cir. 1965).

78. *See, e.g.*, Katz v. Carte Blanche Corp., 496 F. 2d 747 (3rd Cir. 1974), *limited* in Peritz v. Liberty Loan Corp., 523 F. 2d 349 (7th Cir. 1975).

79. *See* Rheingold, *Mass Disaster Litigation and the Use of Plaintiff's Groups*, 3:3 LITIGATION 18 (1977).

80. *See* Ninth Recommendation, p. 239 *infra*.

81. *See* discussion in Appendix J, *Review of Available Information on the Health Effects of Hazardous Waste Disposal*.

82. *See, e.g.*, Clean Air Act §§113, 42 U.S.C. §7413 (Supp. 1980) (civil abatement action), 113(c)(1)(a), 42 U.S.C. 7413(c)(1)(a) (Supp. 1980) (criminal prosecution); Federal Water Pollution Control Act §§309(d), 33 U.S.C. §1319(d) (Supp. 1980) (civil penalties action), 309(c)(1), 33 U.S.C. §1319(c)(1) (criminal prosecution). Conn. Public Act No. 81-443 (1981), Fla. Stat. Ann. §403.421 (Harrison 1979); Ind. Code Ann.

    §13-6-1-1 (Burns 1981); Mass. Ann. Laws, ch. 214, §7A (Michie Law Co-op 1973, 74); Minn. Stat. Ann. §§116B.01-03 (West 1977); N.J. Stat. Ann. §§2a:35A-1 to 14 (West Supp. 1981); S.D. Codified Laws Ann. §§34A-10-1 to 15 (1977). *See also* GRAD, TREATISE ON ENVIRONMENTAL LAW (1981) at 3.04, pp. 3-204 to 3-215 for a table of civil and criminal penalties under state water pollution laws.

83. *See* text accompanying notes 95-158 *infra*.

84. 42 U.S.C. §§401-31 (Supp. IV 1980).

85. 42 U.S.C. §§1395 et seq. (Supp. IV 1980).

86. 42 U.S.C. §§1396-97 (Supp. IV 1980).

87. 30 U.S.C. §§901-41, 951, 958 (Supp. IV 1980).

88. 45 U.S.C. §§51-60 (Supp. IV 1980).

89. 46 U.S.C. §§688-92 (Supp. IV 1980).

90. 33 U.S.C. §§901-50 (Supp. IV 1980).

91. 42 U.S.C. §§2210-25 (Supp. IV 1980).

92. 28 U.S.C. §§1346(b), 1402, 2401, 2671-80 (Supp. IV 1980).

93. 428 U.S. 1 (1975).

94. 28 U.S.C. §§1346(b), 1402, 2401, 2671-80 (Supp. IV 1980).

95. *See* Hawaii Rev. State §342-16 (1976); Idaho Code §39-108(8) (1977); Ky. Rev. Stat. §224.995(3) (1977); La. Rev. Stat. Ann. §30:1074 (1980); Mo. Ann. Stat. §260.425(7) (Supp. 1980); Nev. Rev. Stat. §445.321 (1980); N.M. Stat. Ann. §74-6-13 (1980); N.D. Cent. Code §32-40-04 (1980); Pa. Stat. Ann. Tit. 35, §6018.607 (1980);

96. Alaska, North Carolina, North Dakota, Rhode Island.

97. N.D. Cent. Code §§32-40-01 _et seq_. (1980).

98. N.D. Cent. Code §32-40-06 (1980).

99. R.I. Gen. Laws §23-19.1-22 (1980).

100. Me. Rev. Stat. Ann. tit. 38, §1306-B2 (1980).

101. Alaska Stat. §46.03.824 (1980).

102. N.C. Gen. Stat. §§143-215.77 (18), 143-215.93 (1980).

103. N.H. Rev. Stat. Ann. §147:58(I)(Supp. 1981).

104. N.H. Rev. Stat. Ann. §147:58(II)(Supp. 1981).

105. State statutes with special provisions on oil pollution include: Alaska Stat. §46.03.760 _et seq_. (1971); Mass Ann. Laws, ch. 21 §27(14)(Supp. 1977); N.C. Gen. Stat. §143-215.75 _et seq_. (Supp. 1978); Vt. Stat. Ann. tit. 10, §1281 (Supp. 1981); Va. Code Ann. §62.1-195 (Supp. 1973); Wash Rev. Code §90.48.315 (Supp. 1982). Special state oil pollution statutes include: Florida Oil Spill Prevention and Pollution Control Act, Fla. Stat. Ann. §376.11 _et seq_. (1975); Maine Oil Discharge Prevention and Pollution Control Act, Me. Rev. Stat. Ann., tit. 38, §541 _et seq_. (1978); Michigan Watercraft Pollution Control Act, Mich. Comp. Laws Ann. §323.337 (Supp. 1977); California Harb. & Nav. Code, §151 (1971); New Jersey Spill Compensation and Control Act of 1976, N.J. Stat. Ann. §58.10-23.11 _et seq_. (1982). _See generally_ GRAD, _supra_. note 82, at 3-232 _to_ 3-239.

106. Special requirements are present in: Conn. Gen. Stat. Ann. §25-54(ii)(Supp. 1982); Me. Rev. Stat. Ann. tit. 38 §545 (1978); Fla. Stat. Ann. §376.06 (Supp. 1972); Conn. Gen. Stat. Ann. §25-54(cc) (Supp. 1982). Statutes establishing fines for failure to notify the proper authorities of a spill include: Conn. Gen. Stat. Ann. §25-54dd (1982); N.J. Stat. Ann. §58:10-23.11e (1982); Wash. Rev. Code §90.48.360 (Supp. 1982). Statutes providing criminal fines for a spill include: Alaska: no greater than $25,000 or one year imprisonment, or both, for each offense; Massachusetts: not more than $10,000 per day for each day a spillage continues, or imprisonment not more than two years, or both; Virginia: a fine not exceeding $2,500 or less than $500 or imprisonment not more than one year nor less than 30 days, or both. Statutes providing civil penalties for a spill include: Alaska: not less than $5,000 nor more than $100,000 (liquidated damages); Florida: not more than $50,000 for each offense, each day constituting a separate offense; California: not more than $6,000; Maine: not less than $1,000 nor more than $5,000; New Jersey: not more than $25,000 for each offense, each day constituting a separate offense; North Carolina: not more than $5,000; Washington: not greater than $20,000 for each violation.

107. *E.g.*, Conn. Gen. Stat. Ann. §25-54ee (Supp. 1971); Fla. Stat. Ann. §376.09(1) (Supp. 1972); Me. Rev. Stat. Ann. tit. 38 §548 (Supp. 1972) Mass. Ann. Laws, ch. 21 §27(14) (Supp. 1977); N.J. Stat. Ann. §58:10-23.11f (Supp. 1977); Wash. Rev. Code §90.48.330 (Supp. 1971); Mich. Comp. Laws. Ann. §323.337 (Supp. 1972).

108. *See, e.g.*, Alaska Stat. §46.03.770 (1971); Me. Rev. Stat. Ann. tit. 38, §552-A (Supp. 1977). (Both statutes provide for detention of a polluting vessel until clean-up costs are paid. The Alaska statute further provides for auction sale if costs are not paid).

109. *See, e.g.*, oil pollution laws of Connecticut, Florida, California, Maine, Massachusetts, Michigan and Washington. *See particularly* Mass. Ann. Laws, ch. 21 §27(14) (Supp. 1977); Me. Rev. Stat. Ann. tit. 38 §551(2) (Supp. 1972); Wash. Rev. Code §90.48.336 (Supp. 1971).

110. *See* Fla. Stat. Ann. §376.12 (1975); Mass. Ann. Laws, ch. 21 §27(14) (Supp. 1977); Me. Rev. Stat. Ann. tit. 38 §551(2) (Supp. 1972); Wash. Rev. Code §90.48.336 (Supp. 1971).

111. *See* note 109 *supra* and accompanying text for statutes with general non-specific authorization.

112. In a few states, it is not necessary for the state to prove or plead negligence; these states impose strict liability based on proof of the prohibited discharge or other polluting conditions and that it occured. (Fla. Stat. Ann. §376.12 (Supp. 1972); Me. Rev. Stat. Ann. §552(2) (Supp. 1972); Wash. Rev. Code §90.48.336 (Supp. 1971)). However, some states permit defenses to claims for cleanup costs, (Wash. Rev. Code §90.48.320 (Supp. 1971)) or grant a waiver from the requirement to reimburse the state after liability for cleanup costs has been adjudged, (Me. Rev. Stat. Ann. §551(7) (Supp. 1972); Fla. Stat. Ann. §376(6)(b) (Supp. 1972)) if the unlawful discharge is the result, for example, of an act of war (Maine, Washington, Florida), an act of government (state, federal or municipal)(Maine, Washington, Florida), an act of God (Maine, Florida), or an act of omission of a third party (Florida).

113. Fla. Stat. §403.724(1) (Supp. 1980).

114. Okla. Stat. tit. 63, §1-2008(B) (Supp. 1980).

115. Fla. Stat. §§403.724(3)(b), (c) and (d).

116. Fla. Stat. §403.724(3) (Supp. 1981).

117. Fla. Stat. §403.724(6) (Supp. 1981).

118. Okla. Stat. tit. 63, §1-2008(B) (Supp. 1981-82).

119. *See* Miss. Code Ann. §17-17-27(h)(1980); Neb. Rev. Stat. §81-1521.04 (1980); N.H. Rev. Stat. Ann. §147:52(I)(1980); Pa. Stat. Ann. tit. 35, §6018.506 (1980). Tennessee requires bonds to be posted to cover cleanup costs but not damages in a private action. Tenn. Code. Ann. §53-6308(c)(1) (Supp. 1981).

120. Statutes requiring financial responsibility are: Ga. Code Ann. §43-2909(1) (1980); Utah Code Ann. §26-37-7(4)(c) (1980). Statutes requiring bonding are: Ky. Rev. Stat. Ann. §225.884 (1980); Md. Nat. Res. Code Ann. §8-1413.2(K)(11) (1980); Nev. Rev. Stat. §445.294 (1980). (footnote 120 continued on table *infra*).

TABLE II
SUBPART H
FEDERAL vs. STATE FINANCIAL REQUIREMENTS

Regions and States	Other	Closure&Post Closure Trust Funds	Surety Bond Guaranteeing Payment Closure&Post-Closure	Surety Bond Guaranteeing Performance	Letters of Credit	Liability Insurance (Lia)	Cost Estimates For Closure &Post-Closure	Cash Deposits	Certificates of Deposit (CDs)	Financial Test	Self-Insurance	Use of Multiple Financial Mechanisms	Use of Financial Mechanism For Several Facilities	Release Owners/Operators From Financial Assurance Reqmts.	Use of Financial Mechanism for Both Closure&Post-Closure Care	Incapacity of Inst. Issuing Financial Mechanism or Insur.
REGION I																
Connecticut																
Maine		•				•		•				•				
Massachusetts		•	•	•	•	•	•					•	•	•	•	•
New Hampshire		•	•	•	•	•	•									
Rhode Island		•		•		•	•									
Vermont																
REGION II .																
New Jersey	4	•		•	•		•			•		•	•		•	
New York																
Puerto Rico						•	•									
Virgin Islands			•			•										
REGION III																
Delaware							•									
Maryland		•	•	•	•	•	•					•	•	•	•	
Pennsylvania							•									
Virginia	4	•	•		•	•	•					•	•		•	•
West Virginia																
Dist.of Columbia		1					1									
REGION IV																
Alabama							•									
Florida																
Georgia		•		•	•	•	•			•		•	•	•	•	
Kentucky		•				•	•	•						•		
Mississippi																
North Carolina							•									
South Carolina	1	•				•	•	•			•					
Tennessee							•									
REGION V																
Illinois																
Indiana																
Michigan	1	•				•	•	•								
Minnesota																
Ohio																
Wisconsin		•				•	•	•	•							

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TABLE II

SUBPART H

FEDERAL vs. STATE FINANCIAL REQUIREMENTS

(CONT.)

Regions and States	Other	Closure&Post Closure Trust Funds	Surety Bond Guaranteeing Payment Closure&Post-Closure	Surety Bond Guaranteeing Performance	Letters of Credit	Liability Insurance (LIs)	Cost Estimates For Closure &Post-Closure	Cash Deposits	Certificates of Deposit (CDs)	Financial Test	Self-Insurance	Use of Multiple Financial Mechanisms	Use of Financial Mechanism For Several Facilities	Release Owners/Operators From Financial Assurance Reqmts.	Use of Financial Mechanism for Both Closure&Post-Closure Care	Incapacity of Inst. Issuing Financial Mechanism or Insur.
REGION VI																
Arkansas							•									
Louisiana		•					•									
New Mexico																
Oklahoma							•									
Texas							•									
REGION VII																
Iowa							•									
Kansas	1	•		•		•		•								
Missouri	1	•	•					•								
Nebraska																
REGION VIII																
Colorado																
Montana							•									
North Dakota																
South Dakota																
Utah							•									
Wyoming																
REGION IX																
Arizona		•		•		•	•				•					
California	2	•		•			•									
Hawaii																
Nevada																
American Samoa																
North Mariana Is.																
Guam																
REGION X																
Alaska																
Idaho																
Oregon	1		•			•										
Washington				•		•	•									
TOTALS		17	7	10	6	17	28	7	1	3	2					

EPA draft document, May, 1981

THE COUNCIL OF STATE GOVERNMENTS — November 1981

HAZARDOUS WASTE FUNDS

State or other jurisdiction	State Hazardous Waste Trust and Spill Funds	Source of fund	Major scope of fund
Alabama	Hazardous Waste Management Fund	F(o)	Administrative costs.
	Perpetual Care Fund	F(o)	Monitoring beyond the active use of the site.
Alaska	...	...	...
Arizona	Hazardous Waste Trust Fund	F(o)	Operation, maintenance, perpetual care.
Arkansas	...	...	...
California	Hazardous Substances Account	T(g)	Match federal superfund monies, cleanup, incident contingency fund, victim compensation fund, health studies, emergency equipment.
Colorado	Hazardous Waste Disposal Fund	L,P	...
	Emergency Response Cash Fund	L	Emergency response.
Connecticut	Emergency Spill Response Fund	L,R	Oil and hazardous spills
Delaware	...	...	...
Florida	Hazardous Waste Management Trust Fund	L,T,F(o),R,P	Reduce hazard at abandoned sites.
Georgia	Hazardous Waste Trust Fund	F(o),B*	Maintenance of abandoned sites.
Hawaii	...	...	...
Idaho	...	...	...
Illinois	Hazardous Waste Fund	F(o)	Take action against long term danger, research and development of recycling.
Indiana	Hazardous Substances Emergency Trust Fund	T(g)	Emergency response, match under superfund.
	Environmental Management Special Fund	F,P	Multipurpose environmental response.
Iowa	...	...	...
Kansas	Perpetual Care Trust Fund	F(o),L	Cleanup and monitoring.
Kentucky	Hazardous Waste Management Fund	F(g)(o),R	Emergency response, postclosure, monitoring, and maintenance.
Louisiana	Hazardous Waste Protection Fund	B*,L	Perpetual care, assure financial responsibility.
	Abandoned Hazardous Waste Site Fund	excess $,L	Match federal funds, cleanup at abandoned sites.
	Environmental Emergency Response Fund	R,L,P	Environmental emergency responses, match federal funds.
Maine	Hazardous Waste Fund	F(g),F(t*)	Emergency response.
Maryland	Oil Disaster Containment Cleanup & Ctgy Fund	F(o),P,R	Oil and petroleum products spills.
	Hazardous Substance Control Fund	F(o),L	Hazardous substances in water cleanup.
Massachusetts	...	...	...
Michigan	Disposal Facility Trust Fund	F,(o)	Long term care of closed facilities.
	Hazardous Waste Service Fund	L,R	Emergency response.
Minnesota	...	...	...
Mississippi	...	...	...
Missouri	Hazardous Waste Fund	F(g),T(o),L	Administrative costs, cleanup.
Montana	...	...	...
Nebraska	...	...	...
Nevada	State Emergency Fund	L	Emergency response.
New Hampshire	Hazardous Waste Cleanup Fund	F,P,L	Cleanup.
New Jersey	Spill Compensation Fund	T(o),L	Cleanup of spills.
New Mexico	Hazardous Waste Emergency Fund	L,R,P	Cleanup, disposal, containment.
New York	Hazardous Waste Remedial Fund	L	Emergency response.
	Environmental Protection & Spill Comp. Fund	P	Oil spills only.
North Carolina	...	...	...
North Dakota	...	...	...
Ohio	Hazardous Waste Facility Mgmt. Special Acc.	F(g)	Administration, closure, abatement, grants.
	Emergency Response Spill Fund	L,P	Emergency response to spills.
Oklahoma	...	...	...
Oregon	Hazardous Waste Account	F(g)	Perpetual care.
Pennsylvania	Solid Waste Abatement Fund	F,R,B*	Emergency situations, spills.
Rhode Island	Hazardous Substance Emergency Fund	L,B	Abandoned site spills.
South Carolina	Hazardous Waste Contingency Fund	F(g)	Emergencies at permitted landfills.
South Dakota	...	...	...
Tennessee	Hazardous Waste Trust Fund	B*	Cleanup, perpetual care.
	Perpetual Care Trust Fund	F(o)	Containment of abandoned site.
Texas	Disposal Facility Response Fund	L	Match federal superfund monies.
Utah	...	...	...
Vermont	Oil and Hazardous Spill Contingency Fund	L,R	Response to spills, hazardous substances.
Virginia	...	...	...
Washington	...	...	...
West Virginia	...	...	...
Wisconsin	Hazardous Waste Fund	F(o)	Closing and longterm care.
	Hazardous Substances Spill Fund	L,B	Cleanup and disposal.
Wyoming	...	...	...
D.C.	Pending	...	...
American Samoa	...	...	...
Guam	...	...	...
No. Mariana Is.	...	...	...
Puerto Rico	...	...	...
Virgin Islands	...	...	...

Key:
F - Fees
L - Legislative appropriations
P - Penalties
R - Reimbursements
B* - Bond forfeiture
T - Taxes
B - Bond supported
o - Operator
g - Generator
t* - Out-of-state transporters

Source: Compiled by The Council of State Governments, November, 1981.

122. Ala. Code. §§22-30-23, 23-30-9 (Supp. 1981).

123. Ariz. Rev. Stat. Ann. §36-2805 (Supp. 1981-82).

124. Colo. Rev. Stat. §29-22-105 (Supp. 1981).

125. Conn. Gen. Stat. Ann. §25-54ee(d) (Supp. 1981).

126. Ga. Code §43-2909(4) (Supp. 1981).

127. Ill. Ann. Stat. ch. 111-1/2, §1022.2 (Supp. 1981-82).

128. La. Rev. Stat. Ann. §§30:1143, 30:1149 (Supp. 1982).

129. Md. Nat. Res. Code Ann. §8-1413.2(f) (Supp. 1981).

130. Mich. Comp. Laws Ann. §299.543 (Supp. 1981-82).

131. Cal. Health & Safety Code §25300 (1981).

132. N.H. Rev. Stat. Ann. §§147-B:3, 147-B:6 (Supp. 1981).

133. N.M. Stat. Ann. §74-4-8 (1981).

134. N.C. Gen. Stat. §143-215-87 (Supp. 1979).

135. Pa. Stat. Ann. tit. 35, §6018.701 (Purdon 1981-82).

136. Tenn. Code Ann. §53-6308(c)(6) (Supp. 1981).

137. Wis. Stat. Ann. §144.76(6) (Supp. 1981).

138. N.J. Rev. Stat. §58:10-23.11g(a) (1982).

139. N.J. Rev. Stat. §58:10-23.11q (1982).

140. N.J. Rev. Stat. §58:10-23.11g(a) (1982).

141. N.J. Rev. Stat. §58:10-23-11(l) (1982).

142. Id.

143. N.J. Rev. Stat. §58:10-23-11(m) (1982).

144. Fla. Stat. §403.725(1) (Supp. 1981).

145. Cal. Health and Safety Code §§25300-25611 (1981).

146. Cal. Health and Safety Code §25372 (1981).

147. Cal. Health and Safety Code §25372 (1981).

148. Cal. Health and Safety Code §25375 (1981).

149. Cal. Health and Safety Code §25373 (1981).

150. Cal. Health and Safety Code §25378 (1981).

151. Cal. Health and Safety Code §25376 (1981).

152. Cal. Health and Safety Code §25330 (1981).

153. Cal. Health and Safety Code §25380 (1981).

154. Cal. Health and Safety Code §25379 (1981).

155. 411 U.S. 325, 5 E.R.C. 1209 (1973). *See also, Steuart Transp. Co. v. Allied Towing Corp.*, 596 F.2d 609 (4th Cir. 1979), where it was held that the limitation of Liability Act does not prevent or preempt a state from recovering its cleanup costs under a state oil pollution control law, without regard to the extent of liability. *See generally* GRAD, *supra* note 82, at §304, p. 3-237 and §3.03[8].

156. CERCLA §114(c) 42 U.S.C. 19614(c) provides:

> Except as provided in this Act, no person may be require to contribute to any fund, the purpose which is to pay compensation for claims for any costs of response or damages or claims which may be compensated under this title. Nothing in this section shall preclude any state from using general revenues for such a fund, or from imposing a tax or fee upon any person or upon any substance in order to finance the purchase or prepositioning of hazardous substance response equipment or of other preparations for the response to a release of hazardous substances which affects such state.

The Exxon Corporation and four other corporations required to pay taxes under the New Jersey Spill Act brought suit in federal district court in New Jersey alleging preeimption and seeking a refund of taxes paid. On July 27, 1981, the court dismissed the suit, holding that the corporations has an effective and efficient remedy for their grievances in state court. In an effort to seek federal court approval of the tax New Jersey later sought a declaratory judgment that the provisions of the State Spill Compensation and Control Act of 1979 are not preempted by the federal Superfund Act of 1980. New Jersey lost its bid for federal court approval when the U.S. District Court of the District of Columbia dismissed the suit on November 10, 1981 (New Jersey v. U.S., C.A. No. 81-945, Hazardous Waste L.R., 12/1/81, 1650). Five petrochemical companies revived the issue on December 18, 1981 asking a state tax court to bar the state from collecting the surcharges. (Exxon *et al*. v. New Jersey, No. SC.303A-81). On April 23, 1982, the tax court held for the State in a detailed opinion. The court approved New Jersey's argument that CERCLA §114(c) is a *spending* prohibition rather than a *tax collection* prohibition, and that therefore the state may collect these surcharges for the cleanup of oil spills and for third-party damage claims, which may be broader under the state Spill Fund than under the Superfund. In addition, the court approved New Jersey's position that CERCLA would actually thwart cleanup efforts in New Jersey if §114(c) preempts state surcharges, because the federal act would provide cleanup funds for only a few of the over 300 hazardous waste sites identified in New Jersey. The petrochemical companies have appealed the tax court decision to the state appellate court. See Hazardous Waste L.R., 5/18/82, 2436.

157. N.C. Gen. Stat. §143-215.94 (1978).

158. Cal. Health and Safety Code §25363(b) (1981).

159. Pa. Stat. Ann. tit. 35, §6018.611 (Supp. 1982). A person who "stores, treats or disposes of hazardous waste shall be liable, without proof of fault, negligence, or causation for all damages, contamination or pollution within 2,500 feet of the perimeter of the area where the hazardous waste activities have been carried out."

160. Id.

161. See Report pp. 92-94 infra

162. 422 U.S. 66 (1975).

163. See California v. Sierra Club, 451 U.S. 287 (1981); Transamerica Mortgage Advisors, Inc. v. Lewis, 444 U.S. 11 (1979); Touche Ross and Co. v. Redington, 442 U.S. 560 (1979).

164. 422 U.S. at 78.

165. See cases cited note 163 supra.

166. 451 U.S. 287, supra note 163.

167. 33 U.S.C. §403 (1976).

168. 451 U.S. at 294.

169. Id. at 298.

170. 453 U.S. 1 (1981).

171. 451 U.S. 304 (1981).

172. 33 U.S.C. §1401 et seq. (1976).

173. 453 U.S. at 11, citing EPA v. California ex rel. State Resources Control Board, 426 U.S. 200, 204 (1976).

174. Id.

175. 33 U.S.C. §1411(a).

176. Id. §1411(b).

177. 33 U.S.C. §1319(a)(1) (1976).

178. Id. §1319(d).

179. *Id.* §1342(b)(7).

180. *Id.* §1369(b).

181. *Id.* §1365(a)(1). Such citizen suit provisions may not be used, however, *to* assert private claims for damages; they are limited to vindicating the public interest. GRAD, *supra* note 82 at §3.03[10][b], text at note 30.3.

182. 453 U.S. at 13-14 (The Court stated that most of FWPCA's enforcement mechanisms have their counterpart under MPRSA).

183. Id. (citing Transamerica Mortgage Advisors, Inc. v. Lewis, 444 U.S. 11, *19* (1976)). Although not suggested by the parties, the Court discussed a possible alternative to express authorization of private suits under congressional enactments, namely §1 of the Civil Rights Act of 1871, 42 U.S.C. §1983 (1976). Section 1 authorizes private suits to redress violations by government officials of rights created by federal statutes. It provides that

> [e]very citizen, who under color of any statute...of any state...causes any citizen of the United States or any person within the jurisdiction thereof the deprivation of any rights...secured by the Constitution and laws, shall be liable to the party injured in an action at law.

The application of §1 to actions for damages for the violation of federal antipollution suits is limited. Only persons harmed by state officials may sue under the provision. In most cases, however, the defendant in an enforcement action is an industrial enterprise and not a proper defendant under §1. *See Environmental Law — Private Remedies for Pollution of Navigable Waters*, 50 N.C. L. Rev. 153, 154 (1971). In addition §1 will not be applied if the Court determines that Congress foreclosed private enforcement of the violated statute within the enactment itself. For example, "[w]hen the remedial devices provided in a particular act are sufficiently comprehensive...they may suffice to demonstrate congressional intent to preclude the remedy of suits under §1983." 101 S. Ct. at 2626. Because of the comprehensive enforcement provisions of FWPCA and MPRSA, the Court refused to grant relief under §1. Given the similarly comprehensive nature of other modern federal anti-pollution statutes, it is also unlikely that §1 will provide relief for their violation.

184. Clean Air Act, §304, 42 U.S.C. §7604 (Supp. 1980), Federal Water Pollution Control Act, §505, 33 U.S.C. §1365 (1978).

185. Restatement (Second) of Torts; §874A Comment c, d at 302-3. *See also id.* Comment f at 304-5 (The private action permitted usually *sounds in tort*. Typically the action is assimilated to the common law of torts, however, the court may create a new tort action).

186. *Id.* Comment i at 310-11.

187. 451 U.S. 304, *supra* note 169.

188. Under the principles of statutory construction adhered to in virtually all of the states, it is clear that state statutes can and often do preempt previously extant State common law. As a general matter, the common law "prevails throughout the United States except where modified, changed, or repealed by statute or constitutional provision." 15A Am. Jur. 2d Common Law §13 (1976). When a statute and the common law conflict "the common law yields to the statute to the extent of the inconsistency, but where the legislative intent is shown to encompass an entire area, then that statute preempts the common law." Watkins v. State, 42 Md. 349, 400 A.2d 464, (1979). State court inquiry primarily is focused on state legislative intent. In this respect, State courts' reasoning is quite similar to that evident in the Milwaukee and National Sea Clammers cases. State statutes which provide for a specific matter already covered by a common law rule but omit a portion of that rule can be interpreted to indicate a legislative intent to repeal those portions omitted. 73 Am. Jur. 2d Statutes §185 (1974). However, if a statute does not address a common law rule in its entirety and merely touches upon portions of the rule, the remaining portions not considered are not repealed or abrogated. *See* Fabricius v. Montgomery Elevator Co., 254 Iowa 1319, 121 N.W.2d 361 (1963); Pennsylvania Mutual Life Insurance Co. v. Hunt, 237 Mass. 241, 129 N.E. 391 (1921); Tucson Gas & Electric v. Schantz, 5 Ariz. App. 511, 428 P.2d 686 (1967); State v. Barne 133 Neb. 676, 276 N.W. 676 (1937). A legislature may abrogate or change common law by statute without providing an adequate substitute. Magierowski v. Buckley 39 N.J. Super. 534, 121 A.2d 749 (1956). Sands has summarized the principles courts use in deciding the common law displacement issue:

> [a statutory interpretation is favored which] preserves the rights or benefits enjoyed under the common law where the result avoids absurdity, retroactivity, unconstitutionality, is in keeping with good policy, is consistent with what is otherwise indicated to be the purpose of the legislation, or is evident from a consideration of the statute read as a whole and in conjunction with other related statutes.

3 SUTHERLAND STATUTORY CONSTRUCTION §61.02 (Sands, 4th ed., 1972).

In recent times, there has been a tendency to construe remedial state statutes less strictly and thus to find that state statutes indicate a change in the policy of the law in derogation of the prior common law. 3 SUTHERLAND STATUTORY CONSTRUCTION §61.03. Many states have adopted laws that seek to change courts' strict interpretations of statutes which displace the common law, but these laws generally are meant simply to eliminate bias toward either a liberal or strict construction. 3 SUTHERLAND STATUTORY CONSTRUCTION §61.05.

189. *Id.* §286, Comment c at 25.

190. Id. §286(a) at 25. *See, e.g.*, Hidalgo v. Cochise Cty., 13 Ariz. App. 27, 474 P.2d 34 (1979) (Negligence action for damages due to injuries sustained in two vehicle intersection collision. Plaintiff contended that the driver's vision was impaired by Johnson grass growth in a ditch adjacent to the intersection. Suit was based upon an alleged violation of Ariz. Rev. Stat. §13-1015 (repealed 1978) which made it unlawful for "[a] person possessing...controlling or operating irrigation canals, ditches,...or any part thereof, to permit [named] weeds...to grow... in or along any such places..." The court reasoned that the statute was enacted to protect farming and ranching areas from encroachment of noxious weeds, not to protect travelers on roadways).

191. Restatement (Second) of Torts §286(b) at 25; *see*, *e.g.*, *id*. Illustration 3 at 28. ("A factory Act requires persons *operating* or leasing buildings for factory purposes to keep the building in safe repair. A leases his factory to B. A fails to repair the roof. In consequence it falls, injuring C, one of B's employees. The fall of the roof causes the factory to close for a month, thus depriving D, another employee of B, of his employment. The statute establishes a standard of conduct as to C's injuries, but not as to D's loss of employment.")

192. Restatement (Second) of Torts, §286(c), (d) at 25; *see*, *e.g.*, Memorial Park, Inc. v. Spinelli, 342 So. 2d 829 (Fla. 1977) (wrongful death action for the death of a motorcyclist in a collision with an automobile. Decedent's administratrix alleged that defendant was negligent in erecting a commercial sign which obstructed the line of vision between the two drivers. Suit was based upon Fla. Stat. Ann. §316.135(2). Section 316.135(2) stated that "[n]o person shall place or maintain nor shall any public authority permit upon highway any traffic sign or signal having thereon any commercial advertising...." The court did not permit the action to be based upon the statute. It deemed the provision intended to prevent the placing of commercial signs upon official signs and the resulting diverting of attention away from the latter. In contrast, decedent's death stemmed from visual obstruction; a harm against which the statute was not intended to protect).

193. PROSSER, *supra* note 19, at 201 (Prosser also suggests that there are "statutes, such as child labor laws, so clearly intended to protect a particular class of persons against their own inability to protect themselves, that the policy of the legislature is interpreted to mean that [the defenses of contributory negligence and assumption of risk] are not available").

194. *Id*.

195. 276 F. 2d 455 (4th Cir. 1960). *See also* Freeman v. Olin Corp., CV 80-M-5057 (N.D. Ala., Aug. 14, 1981)(Alabama Pesticide Act establishes a standard of conduct on which plaintiffs could base a negligence *per se* claim); *cf*. Silkwood v. Kerr-McGee Corp., 485 F. Supp. 566 (W.D. Okla. 1979). The issue was whether compliance with a federal statute precluded an action under state common law strict liability principles. The court, discussing that issue noted: "the correlative rule is also applied that violation of a safety regulation constitutes conclusive proof of negligence *per se*." *Id*. at 579, citing Orthopedic. Silkwood v. Kerr-McGee was *aff'd in part*, 667 F. 2d 908 (10th Cir. 1981) (holding that the Price Anderson Act contemplates that state tort law applies in some cases involving nuclear incidents but preempts state law on punitive damages).

196. PROSSER, *supra* note 19, at §36, at 203-04.

197. Restatement (Second) of Torts.

198. *Id*. at §288C, Comment a.

THE COUNCIL OF STATE GOVERNMENTS

November 1981

HAZARDOUS WASTE MANAGEMENT IN THE STATES

			Siting Hazardous Waste Facilities						Transportation	Enforcement
			Permitting/Approval Authority			Siting Provisions				
State or other jurisdiction	State[2] hazardous waste management programs	State hazardous waste management plans	State level department	State level board	State level siting board	State ownership/ operation	State preemption	Local veto	State manifest system	Felony Status
Alabama	*	pdg	...	x	...	...	...	...	x	x
Alaska	#	...	x	...	...	...	...	...	...	x
Arizona	+	...	x	...	...	x	x	...	...	...
Arkansas	*	x	x	...	...	...	...	x	x	...
California	*	x	x	...	...	...	...	...	x	...
Colorado	+	x	x	...	...	...	...	x	...	...
Connecticut	(* pdg)	...	x	...	x	...	x	...	x	x
Delaware	*	x	...	...	...	...	...	...	x	...
Florida	(* pdg)	x	x	...	...	...	x	...	...	x
Georgia	*	x	x	...	...	x	x	...	x	x
Hawaii	+	...	...	...	...	...	...	...	...	...
Idaho	x	pdg	...	...	...	...	...	...	...	...
Illinois	(* pdg)	x	x	...	...	...	...	x	x	x
Indiana	+	...	...	x	x	...	x	x	...	...
Iowa	*	x	...	...	...	...	x	...	x	...
Kansas	*	pdg	x	x	...	x	x	...	x	x
Kentucky	*	x	x	...	...	...	...	x	x	x
Louisiana	*	...	x	x	...	...	...	...	x	...
Maine	*	x	...	x	...	...	x	...	x	x
Maryland	*	x	x	...	x	x	x	...	x	x
Massachusetts	*	x	x	...	...	...	...	...	x	x
Michigan	+	x	x	...	x	...	x	...	x	...
Minnesota	+	x	x	...	x	x	x	...	...	...
Mississippi	*	...	...	x	...	...	...	...	x	...
Missouri	+	x	x	...	...	...	...	...	x	...
Montana	*	x	x	...	...	x	...	...	x	...
Nebraska	x	x	x	...	...	x	...	x	...	...
Nevada	+	pdg	pdg	...	...	x	...	...	x	x
New Hampshire	*	...	x	...	...	...	...	...	x	x
New Jersey	(* pdg)	...	x	...	pdg	...	pdg	...	x	x(c)
New Mexico	+	...	x	...	...	...	x(b)	...	x	...
New York	(* pdg)	pdg	x	...	x	x	...	x	pdg	x
North Carolina	*	x(e)	x	x	...	x	x(b)	...	x	...
North Dakota	*	...	x	...	...	...	...	x	...	...
Ohio	(* pdg)	...	x	...	...	...	x	...	x	x
Oklahoma	*	...	x	...	...	...	...	...	x	...
Oregon	*	x	x	...	...	x	...	...	x	x
Pennsylvania	*	...	x	...	...	...	x	...	x	x
Rhode Island	*	pdg	x	...	...	...	...	...	x	x
South Carolina	*	...	x	...	...	...	...	...	x	...
South Dakota	*	x	...	x	...	...	...	...	...	...
Tennessee	*	...	x	x	...	...	...	...	x	x
Texas	*	...	...	x	...	...	...	...	x	...
Utah	*	...	...	...	...	...	...	...	...	...
Vermont	*	x	...	...	...	...	...	...	x	...
Virginia	*	x(e)	x	...	...	x	x	...	...	x
Washington	+	x	x	...	...	x	...	...	x	pdg
West Virginia	*	x	...	...	...	...	...	...	...	x
Wisconsin	*	...	x	...	...	...	x	...	x	...
Wyoming	x	...	...	...	...	...	...	...	...	...
American Samoa	...	...	...	...	...	...	...	...	...	...
Guam	+	pdg	pdg	...	...	pdg	...	...	pdg	pdg
Puerto Rico	(* pdg)	...	...	...	...	...	...	...	...	...
Virgin Islands	...	...	...	...	...	...	...	...	...	...
D.C.	pdg	pdg	x	...	...	...	...	...	x	...

Key:
* — EPA interim authorization (Phase I).
x - Active state program.
i - Inactive.
+ - Adopted state regulations.
# [illegible]te regulations in development and draft stages.
(a) - Under state solid waste plan.
(b) - Under state eminent domain statutes.
pdg - Pending.
(c) - Some regulations are enforced under misdemeanor status, some under felony status.
(e) - State regulations completed and pending adoption.
Source: Compiled by The Council of State Governments, November, 1981.

[2] Updated January 24, 1982.

200. Restatement (Second) of Torts at §282.

201. PROSSER, *supra* note 19, at §31, p. 145.

202. *Id.* at 143.

203. *See* text accompanying notes 158-167, *supra*.

204. PROSSER, *supra* note 19, at §§32, 37, pp. 149-66, 205-08.

205. *See* *Six Case Studies of Compensation for Toxic Substances Pollution*, *supra* note 42, at 59-474.

206. *See*, *e.g.*, Harper v. Hoffman, 95 Idaho 933, 523 P. 2d 536 (1974); *Whitt v.* Jarnagin, 91 Idaho 181, 418 P. 2d 278 (1966); Dumas v. Hartford Acc. & Indem. Co., 94 N.H. 484, 56 A. 2d 57 (1947); Swenson v. Nairn, 21 N.J. Misc. 70, 30 A. 2d 897 (1943).

207. Cities Services Gas Co. v. Eggers, 186 Okla. 466, 98 P. 2d 1114 (1940).

208. Defeo v. People's Gas Co. of N.J., 6 N.J. Misc. 790, 142 A. 756 (1928).

209. Truman Oil Co. v. Carman, 179 Okla. 388, 65 P. 2d 963 (1936).

210. Pine v. Rizzo, 186 Okla. 35, 96 P. 2d 17 (1939).

211. Defeo v. People's Gas Co. of N.J., 6 N.J. Misc. 790, 142 A. 756 (1928).

212. Pine v. Rizzo, 186 Okla. 35, 96 P. 2d 17 (1939).

213. *See* text accompanying notes 26-75 *supra*.

214. On trespass, see *generally*, PROSSER, *supra*. note 19, at §13, pp. 63-76; on nuisance §§86-91, 571-612. *But see*, disucssion of trespass , text accompanying notes 217-232, *infra*. and of nuisance, text accompanying note 246, *infra*.

215. 523. F. Supp. 659 (E.D. Pa. 1981); 523 F. Supp. 642 (E.D. Pa. 1981); 516 F. Supp. 517 (E.D. Pa. 1981).

216. *Id.* at 532-33.

217. 592 F. 2d 841 (5th Cir. 1979).

218. *See* Davenport v. Georgia Pacific Corp., No. 80-273-C (E.D. Okla., July 29, 1980); Oklahoma v. Georgia Pacific Corp., No. C-80-385 (Mayes County District Court of Oklahoma, Dec. 4, 1980).

219. PROSSER, *supra* note 19, at 69.

220. *Id.* at §13, pp. 63-76.

221. *Id.* at §13, p. 64.

222. *Id.* at p. 66.

223. *Id.*

224. *Id.* at p. 73. *See* GRAD, *supra*. note 82 at §3.05[2]; Davis, *Groundwater Pollution: Case Law Theories for Relief*, 39 MD. L. REV. 117, (1974); Davis, *Theories of Water Pollution Litigation*, 1971 WISC. L. REV. 738.

225. *Id.* at 73-74.

226. *See* Pan American Petroleum Co. v. Byars, 228 Ala. 372, 153 So. 616 (1934); Phillips v. Sun Oil Co., 307 N.Y. 328, 121 N.E. 2d 249 (1954); *See also* GRAD, *supra* note 82, at §3.05[3][b].

227. *See, e.g.*, Phillips v. Sun Oil Co., 307 N.Y. 328, 121 N.E. 2d 249 (1954) (court held that gasoline that seeped from defendant's underground tank onto plaintiff's land did not constitute a trespass. "Even when the polluting materials has been deliberately put onto, or into the defendant's; and, he is not liable for his neighbor's damage therefrom, unless he (the defendant) has good reason to know or expect that subterranean and other conditions were such that there would be passage from the defendant's to the plaintiff's land." *See also* Dillon v. Acme Oil Co., 49 Hun. 565, 2 N.Y.S. 289 (1888).

228. *Id.* *See also* PROSSER, *supra* note 6 at §32; Restatement (Second) of Torts §158, Comment i (1965); Furrer v. Talent Irrigation District, 258 Ore. 494, 466 P. 2d 605, 615 (1971); Curry Coal Co. v. Arnoni Co., 439 Pa. 114, 266 A. 2d 678, 683 (1970).

229. *See* GRAD, *supra* note 82, at §2.02[1] for discussion of actions in nuisance and trespass for air pollution.

230. 221 Ore. 86, 342 P. 2d 790 (1959), *cert. denied* 362 U.S. 918 (1959). *See also* Borland v. Sanders Lead Co., 369 So. 2d 523 (Ala. 1979). *But compare* Born v. Exxon Corp., 338 So. 2d 933 (Ala. 1980).

231. 221 Ore. at 94, 342 P. 2d at 794 (court held that settling of fluorides from defendant's aluminum smelter onto plaintiff's land constituted a trespass).

232. *Id.* at 95-96, 342 P.2d at 794-795.

233. *Id.* at 97, 342 P.2d at 795. *See also* Davis v. Georgia Pacific Corp., 251 Or. 239, 445 P.2d 481, 484 (1968).

234. The utility of the defendant's operations may bear on punitive damages that should be awarded. *See* Davis v. Georgia Pacific Corp., *id.* at 244, 445 P. 2d at 484.

235. *See, e.g.*, King v. Columbian Carbon Co., 152 F. 2d 636 (5th Cir. 1945); Bates v. Quality Ready Mix Co., 261 Iowa 696, 154 N.W. 2d 852 (1968).

236. *See, e.g.*, Boomer v. Atlantic Cement Co., 26 N.Y. 2d 219, 257 N.E. 2d 870, 309 N.Y.S. 2d 312 (1970).

237. *See* note 210 *supra*.

238. *See* Bostick v. Smoot Sand and Gravel Corp., 154 F. Supp. 744 (D. Md. 1957), *rev'd on other grounds* 260 F. 2d 534 (4th Cir. 1954). *See generally*, Spater, *Noise and the Law*, 63 MICH. L. REV. 1373 (1965).

239. *See, e.g.,* Soap Corp. of America v. Reynolds, 178 F. 2d 503 (5th Cir. 1950); Schatz v. Abbott Laboratories, Inc., 51 Ill. App.. 2d 143, 281 N.E. 2d 323, 3 E.R.C. 1989 (1972).

240. *See, e.g.*, E. Rauh & Sons Fertilizer Co. v. Shreffler, 139 F. 2d 38 (6th Cir. 1943) (noxious gases); Signal Mountain Portland Cement Co. v. Brown, 141 F. 2d 471 (6th Cir. 1944) (dust); Boller v. Texas Transmission Corp., 87 F. Supp. 603 (E.D. Mo. 1949) (smoke).

241. *See, e.g.*, Cook Indus. Inc. v. Carlson, 334 F. Supp. 809 (N.D. Miss. 1971).

242. See, *e.g.*, Kostyal v. Cass, 163 Conn. 92, 302 A. 2d 122, Iverson v. Vint, 243 Iowa 949, 54 N.W. 2d 494 (1952).

243. PROSSER, *supra*. note 19 at §89, 594.

244. Id. See, *e.g.*, City of Louisville v. Helemann, 161 Ky. 523, 171 S.W. 165 (1914).

245 *See* text accompanying notes 194-209, *supra*.

246. *See, e.g.*, Vaughn v. Missouri Power and Light Co., 89 S.W. 2d 699 (Mo. App. 1935).

247. *See* text accompanying notes 10-21, *supra*.

248. See Boomer v. Atlantic Cement Co., 26 N.Y. 2d 219, 257 N.E. 2d 870, 309 N.Y.S. 2d 312 (1970). See *also* Comment *Equity and the Ecosystem: Can Injunctions Clean the Air?*, 68 MICH. L. REV. 1254 (1970).

249. *See* Restatement (Second) of Torts §840D Waschak v. Moffatt, 379 Pa. 441, 109 A.2d 310 (1954); Campbell v. Seaman, 63 N.Y. 568 (1876).

250. *See, e.g.*, Wilson v. City of Portland, 58 P.2d 257 (Ore. 1936); Kirk v. McTyeire, 209 Ala. 125, 95 So. 361 (1923); City of Selma v. Jones, 202 Ala. 82, 79 So. 476 (1918).

251. PROSSER, *supra* note 19, §88 at 586.

252. *See* Restatement (Second) of Torts §821B(1). See also PROSSER, *supra* note 19, at §§86-88.

253. *See* Restatement (Second) of Torts §821B Comment d. *See also* PROSSER, *supra* note 19, at §§87, 88.

254. The resulting hedge on the issue is reflected in the Restatement (Second) of Torts §821B(2) (1977). *See* note 255, *infra*.

255. Restatement (Second) of Torts §821B reads:

> §821B Public Nuisance
>
> (1) A public nuisance is an unreasonable interference with a right common to the general public.
>
> (2) Circumstances that may sustain a holding that an interference with a public right is unreasonable include the following:
> (a) Whether the conduct involves a significant interference with the public health, the public safety, the public peace, the public comfort or the public convenience; or
> (b) Whether the conduct is proscribed by a statute, ordinance or administrative regulation; or
> (c) Whether the conduct is of a continuing nature or has produced a permanent or long lasting effect, and, as the actor knows or has reason to know, has a significant effect upon the public right.

256. *See, e.g.*, Atlantic Processing Company v. Brown, 227 Ga. 203, 179 S.E.2d 752, 3 E.R.C. 1319 (1971); Dept. of Health and Mental Hygiene of the State of Maryland v. Galaxy Chemical Co., Inc., 1 E.R.C. 1660 (Md. Cir. 1970); City of Miami v. Coral Gables, 233 So.2d 7 (1970).

257. *Id.*

258. *See, e.g.*, Watson v. Great Lakes Pipeline Co., 855 S.D. 310, 182 N.W.2d 314 (1970).

259. *See* pp. 81-82 *supra*.

260. *See* PROSSER, *supra* note 19, at §88, pp. 587-88. *But cf.*, Rothstein, *Environmental Law — The Nuances of Nuisance in a Private Action to Control Air Pollution*, 80 W. Va. L. Rev. 48 (1977). Rothstein favors the minority view, which would allow a private action when a plaintiff has suffered an injury different merely in degree, and not in kind. *See also* Burgess v. Thomano, 370 F. Supp. 245 (D. Me. 1973); Hill v. Stokely Van Campt Inc., 260 Minn. 315, 109 N.W.2d 749 (1961).

261. *See* 58 Am Jur. 2d §110, pp. 673-74. *See also* Rothstein, *supra* note 228; Prosser, *Private Actions for Public Nuisance,* 52 VA. L. REV. 497 (1966); Restatement (Second) of Torts §821C, especially Comments e and d; Rothstein, *Private Actions for Public Nuisance: The Standing Problem,* 73 W. VA. L. REV. 453 (1974).

262. For the seminal case holding that personal injury is a sufficient interest *see* Savannah, F. & W.Ry. Co. v. Parish, 117 Ga. 893, 45 S.E. 280 (1903). *See also* Wade v. Campbell, 14 Cal Rptr. 173, 200 Cal. App. 2d 54 (1962).

263. Hunnicut v. Euton, 191 S.E. 919, 184 Ga. 485 (1937).

264. Wade v. Campbell, 19 Cal. Rptr. 173, 200 Cal. App. 2d 54 (1962).

265. George v. City of Houston, 465 S.W.2d 387 (Ct. Civ. App. Texas 1971), *rev'd on other grounds* 479 S.W. 257 (Texas 1972).

266. Sullivan v. American Mfg. Co. of Massachusetts, 33 F.2d 690 (4th Cir. 1929).

267. Pownes v. Silva, 57 R.I. 343, 190 A. 42 (1937).

268. *See, e.g.*, Brown v. Petrolane, Inc. 102 Cal. App. 3d 720, 162 Cal. Rptr. 551 (1980); Ventuno v. Owens-Corning Fiberglass Corp., 22 Cal. App. 3d 116, 99 Cal. Rptr. 350 (1971); Page v. Niagra Chemical Division of Food, Machinery and Chemical Corp., 68 So.2d 382 (1953); Belton v. Power Corp., 123 S.C. 291, 115 S.E. 587 (1922); Bultreger v. Cov. Midland Ry. Co., 54 N.C. 242, 32 S.E. 358 (1848).

269. *See, e.g.*, Village of Wilsonville v. SCA Services, 77 Ill. App. 3d. 618, 396 N.E.2d 552 (1979), *aff'd* No. 10052885 (Ill. May 22, 1981) (operation of hazardous waste dumpsite); Greater Westchester Homeowners Ass'n. v. City of Los Angeles, 26 Cal. 3d 86, 160 Cal. Rptr. 733, 603 P.2d 1329 (1978); Varjabedian v. City of Madeira, 20 Cal. 3d 285, 142 Cal. Rptr. 429, 579 P.2d 43 (1977); Lebb v. Town of Rye, 108 N.H. 147, 230 A.2d 223 (1967); Coslus v. Fond Du Lac, 24 Wisc. 2d 409, 129 N.W.2d 217 (1964); People v. City of Reedley, 66 Cal. App. 409, 226 P. 408 (1924).

270. See pp. 79-81 *supra*. See also note, *Hazardous Wastes: Preserving the Nuisance Remedy,* 33 STAN. L. REV. 675 (1981); Lawler, *Right to Maintain Action to Enjoin Public Nuisance as Affected by Existence of Pollution Control Agency,* 60 A.L.R.3d 665 (1974); *The Sewage Disposal Plant as a Nuisance,* 40 A.L.R. 2d 1177 (1955).

271. Rylands v. Fletcher, 139 Eng. Rep. 737, 3 H.S.C. 744 (1865), *rev'd sub nom* Fletcher v. Rylands, L.R. 1 (Ex. 265) (1886), *aff'd sub nom* Rylands v. Fletcher, L.R. 3 (H.L. 330)(1868).

272. PROSSER, *supra* note 19, at 578, 513.

273. See Ginsberg and Weiss, *Common Law Liability for Toxic Torts: A Phantom Remedy,* 9 HOFSTRA L. REV. 859, 915-16.

274. For a discussion of the Products liability area, *see* Ginsberg and Weiss, id. at 905-913.

275. *See, e.g.*, Ginsberg and Weiss, *supra* note 273. See also Note, *Strict Liability for Generators, Transporters and Disposers of Hazardous Wastes*, 64 MINN. L. REV. 949, 971 (1980), at 977

276. 146 N.J. Super. 169, at 177-178, 369 A. 2d 49, at 54 (N.J. Super. 1976).

277. 159 N.J. Super. 154 (1978).

278. *Id.* at 176-77, 369 A. 2d 49 at 53-54. *Cf.* State v. Exxon Corp. 151 N.J. Super. 464, 376 A. 2d 1339 (*Ch.* Div. 1977) (refusing on an "enterprise liability" rationale to hold a new oil storage company strictly liable for a pollution condition created by an independent third party. The court distinguished Lansco, Inc. v. Dept. of Environmental Protection, 138 N.J. Super. 275, 350 A. 2d 520 (Ch. 1975), aff'd 145 N.J. Super. 433, 368 A. 2d 363 (App. Div. 1976).

279. Ginsberg and Weiss, *supra* note 273 at 911.

280. 159 Eng. Rep. 737, 3 H.S.C. 744 (1865), *rev'd sub nom* Fletcher v. Rylands, L.R. 1 (Ex. 265) (1866), *aff'd sub nom* Rylands v. Fletcher, L.R. 3 (H.L. 330) (1868).

281. 3 H.L. 330, 338. A broader statement of the rule of the case is often mistakenly quoted from Justice Blackburn's intermediate opinion in the Exchequer Chamber:

> We think that the rule or law is that the person who for his own purposes brings on his land and collected and keeps there anything likely to do mischief if it escapes, must keep it at his peril, and if he does not do so is prima facie answerable for all damages which is the natural consequence of it escape.

L.R. 1 (Ex. 265, 270-80).

282. For a brief history of Rylands v. Fletcher and its progeny in the English courts, *see* PROSSER, *supra* note 19, at 505-508. *See also* Ginsberg and Weiss, *supra* note 273.

283. Restatement of Torts §520 (1938).

284. *Id.*, comment a.

285. Restatement of Torts §521 (1934). *See, e.g.*, Town of East Troy v. Soo Line Railroad Co., 409 F. Supp. 326, 330 (E.D. Wis. 1976).

286. Restatement of Torts §523 (1934).

287. PROSSER, *supra* note 19, at §79, p. 520.

288. Restatement of Torts §523, comment d.

289. *Id.* at §524(2) (1934).

290. *Id.* at §524(1).

291. Restatement of Torts §522. But *see* Trotter v. Callens, 89 N.M. 19, 546 P.2d 867, 869 *cert. denied* 89 N.M. 207, 549 P.2d 285 (N.M. 1976) (New Mexico still recognizes "Act of God" defense in strict liability action).

292. *See* §522, Comment a. The American Law Institute does not, however, express an opinion as to liability of the actor where the actions of the third party were deliberate and intended to bring about the injury. *See* caveat to §522.

293. Restatement (Second) of Torts §520B.

294. *Id.* at §522.

295. *Id.* at Caveat to §522.

296. *Id.* at §524(1). *See also* Murray v. Beloit Power Systems, Inc., 450 F. Supp. 1145, 1147 (D.V.I. 1978) (dictum).

297. Restatement (Second) of Torts §524(2).

298. *Id.* at §521. *See also* McLane v. Northwest Natural Gas Co., 255 Or. 324, 467 P.2d 635, 640-41 (Or. 1970) (public utility status not sufficient to claim public duty defense).

299. *Id.* at §523, Comment c. As to the defense of assumption of risk in general see Restatement (Second) of Torts §§496-496G (1976). In accord with Restatement (Second) of Torts §523, Trull v. Carolina-Virginia Well Co., 264 N.C. 687, 142 S.E.2d 622 (1965) (consent of victim to the abnormal activity within his vicinity); Bringle v. Lloyd 13 Wash. App. 884, 537 P.2d 1060 (1975); Moore, Kelly & Reddish, Inc. v. Shannondale, Inc., 152 W. Va. 549, 165 S.E.2d 113 (1968).

300. *Id.* at §520C.

301. Ginsberg and Weiss, *supra* note 273 at 916.

302. 42 N.Y.2d 440, 368 N.E.2d 24 (N.Y. 1977).

303. 42 N.Y.2d at 450, 368 N.E.2d at 28.

304. N.Y.2d at 448, 368 N.E.2d at 27. The court also stated that responsibility for abnormally dangerous activities is not limited to landowners alone. *Id.* at 28.

305. *See* Luthringer v. Moore, 190 P.2d 1 (Cal. Sup. Ct. 1948) (*en banc*) (strict liability was imposed for injuries sustained by an employee of a tenant of a building. The injuries were caused by the employee's inhalation of hydrocyanic acid gas used as a pesticide).

306. Ginsberg and Weiss, *supra* note 273 at 18, citing Colton v. Onderdonk, 69 Cal. 155, 10 P. 395 (Cal. 1886); Alonso v. Hills, 95 Cal App. 2d 778, 214 P.2d 50 (Cal. App. 1950).

307. Houghton v. Loma Prieta Lumber Co., 152 Cal. 500, 93 P. 82 (Cal. 1907).

308. 255 Or. 324, 467 P.2d 635 (Or. 1970).

309. 255 Or. 324 at 328, 467 P.2d at 638, disapproving Bedell v. Goulter, 199 Or. 344, 261 P.2d 842 (Or. 1953).

310. 255 Or. 324 at 328, 467 P.2d at 638.

311. 182 N.J. Super. 210 (App. Div. 1981).

312. *Id.* at 219.

313. No. C-2996-75 (Super. Ct., Ch. Div., Bergen Co., Aug. 22, 1979), *aff'd, modified and remanded,* 182 N.J. Super. 210 (App. Div. 1981).

314. The Appellate Division stated that the discharges were wrongful throughout the operation of the plant under the common law principle of strict liability and since 1937 under different statutes. Therefore the court held that there was "no constitutional inhibition against retroactive application of the 1980 amendment to the Spill Compensation and Control Act of 1977. The court stated the amendment was "remedial only ..." 182 N.J. at 210.

315. CERCLA §107(f), 42 U.S.C. §9607(f) (Supp. IV 1980).

316. For Post-closure Liability Trust Fund, see CERCLA §232, 42 U.S.C. §9641 which provides for payment of fees into the fund, to be used for cleanup and damages of all kinds, including damages for personal injuries and property damage. CERCLA §§107(k), 111(j), 42 U.S.C. §§9607(k), 9611(j)(1980). Liability insurance under RCRA regulations issued pursuant to RCRA §3004, 42 U.S.C. §6124 is to provide for third party liability coverage for all permitted facilities. 47 Fed. Reg. 16544-16560 (April 16, 1982, 40 C.F.R. 265.147 *et seq.* For discussion, *see* GRAD, *supra* note 112, §4.02[3][b][ii][K] at 4-208 (1981); Meyer, *Compensating Hazardous Waste Victims: RCRA Insurance Regulations and a Not So "Super" Fund Act,* 11 ENV. L. 689 (1981).

317. See text accompanying notes 104-161 *supra.*

318. See text, pp. 92-94 *supra.*

319. See text accompanying notes 112-119 *supra.*

320. State of Maine v. M.V. Tamano, 357 F. Supp. 1097 (D. Me. 1973); Burgess v. M.V. Tamano, 370 F. Supp. 247 (D. Me. 1973).

321. See text accompanying notes 162-184 *supra.*

322. *See, e.g.*, Martin v. Reynolds Metals Co., 221 Or. 86, 342 P.2d 790, *cert. denied* 362 U.S. 918 (1959) (trespass and nuisance). For discussion *see* GRAD, *supra* note 112, §2.02[1] and cases there cited.

323. *See, e.g.*, Globe Aircraft Corp. v. Thomsen, 203 S.W.2d 865 (Ct. Civ. App. Texas, 1947). *See also* GRAD, *supra* note 112, §3.02.

324. *See, e.g.*, Parker v. American Wollen Co., 195 Mass. 591, 81 N.E. 468 (1907); MacNamara v. Taft, 196 Mass. 597, 83 N.E. 310 (1907); Thompson v. Kraft Cheese Co., 210 Cal. 171, 291 P. 204 (1930); American Cyanamid Co. v. Sparton, 267 F.2d 425 (5th Cir. 1959). *See also* GRAD, *supra* note 82, §3.02[1][b].

325. *See, e.g.*, Swift and Co. v. People Coal and Oil Co., 121 Conn. 579, 186 A. 629 (1936); Brown v. Illincis, 25 Conn. 582 (1857) (negligence); Kostyal v. Cass, 163 Conn. 92, 302 A.2d 121 (1972); Iverson v. Vint, 243 Iowa 949, 54 N.W.2d 494 (1952) (private nuisance). *See also* GRAD, *supra* note 82, §3.05[3][c], [e].

326. *See, e.g.*, Yonner v. McKenzie, 255 Md. 220, 257 A.2d 138 (1969). *See also* GRAD, *supra* note 82, §3.05[3][g].

327. Discussion of trespass, text accompanying note, 219-234 *supra*.

328. Discussion of public nuisance, text accompanying note, 251-270 *supra*.

329. *See, e.g.*, Renken v. Harvey Aluminum Co., 226 F. Supp. 169 (D. Or. 1963); Fairview Farms, Inc. v. Reynolds Metal Co., 176 F. Supp. 178 (D. Or. 1959).

330. *See, e.g.*, Globe Aircraft Corp. v. Thomson, *supra* note 323.

331. Hampel v. Nepacco, No. 2109 (Cir. Ct. Pike Cty, 1976), discussed in *Six Case Studies*, *supra* note 42, at 293-297.

332. *See, e.g.*, Ludlow v. Colorado Animal By-products Co., 104 Utah 221, 137 P.2d 347 (1943). *See also* GRAD, *supra* note 112, §2.02[3][a].

333. *See Interagency Task Force on Hazardous Wastes*, State of New York *Department of Environmental Conservation*, 13-14 (October 1979), Hearing Officer: Report on Love Canal impact on residential buildings.

334. *See* GRAD, *supra* note 82, §2.02[1][a] and [3][b].

335. 26 N.Y.2d 219, 257 N.E.2d 870, 309 N.Y.S.2d 312 (1970). For critical comments, *see* Note, 35 ALBANY L. REV. 148 (1970); Note, 39 FORDHAM L. REV. 338 (1970); Note, 45 N.Y.U. L. REV. 919 (1970).

336. *See, e.g.*, Ludlow v. Colorado Animal By-products Co., *supra* note 332, which involved odor pollution in a mixed residential-agricultural area.

III-B. INSURANCE COVERAGE FOR HAZARDOUS WASTE LIABILITIES

One of the obligations of the Study Group under §301(e) of CERCLA is to evaluate:

> "(E) The scope of liability under existing law, and the consequences, particularly with respect to obtaining insurance, of any changes in such liability."

The scope of liability under existing law has been explored in Part III of this Report. The changes in such liability have been recommended in Part IV of this Report and their consequences in obtaining insurance must be addressed here.

Financial Responsibility Under RCRA

As an introductory matter, the requirements for mandatory insurance coverage in the Resource Conservation and Recovery Act (RCRA) and in the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) itself should be noted. Under CERCLA, the very extensive liabilities for clean-up and remedial expenses under §107 1/ of the Act may be insured against, and RCRA contains a statutory requirement that the owner or operator of a disposal site maintain financial responsibility. 2/ The RCRA regulations differentiate between sudden and non-sudden occurrences of risks from hazardous wastes. 3/ A sudden occurrence is usually a one-time release resulting from such events as explosions, spills, fires or breaks in retaining materials. Non-sudden releases, which are far more common, occur over a period of time and may be continuous, intermittent or gradual.

Another example is groundwater seepage caused by design error or by deterioration of sealing material in the containment. Under RCRA, the owner or operator must "maintain liability coverage for sudden accidental occurrences in the amount of at least $1 million per occurrence with an annual aggregate of at least $2 million, exclusive of legal defense costs."[4/] For non-sudden accidental occurrences, the liability coverage requirements are to be phased in over several years, with earlier compliance required of larger facilities. An owner or operator of a surface impoundment, landfill, or land treatment facility must maintain insurance for non-sudden occurrences in the amount of at least $3 million per occurrence, with an annual aggregate of at least $6 million, exclusive of legal defense costs.[5/] The phasing in of this liability coverage requirement is related to size of the business: facilities with annual sales or revenues of $10 million or more must have the required insurance coverage by January 16, 1983; facilities facilities with sales or revenues of $5 to $10 million by January 16, 1984, and all other facilities by January 16, 1985.[6/]

There had been some criticism by industry spokesmen of the uniform levels of insurance required because this works to discriminate against low risk operators. Under the current regulation, however, the Regional Administrator of EPA may grant a variance from the levels of insurance required, if they "are not consistent with the degree and duration of risk associated with the treatment, storage, or disposal at each facility or group of facilities."[7/] EPA has said, however, that it "will propose to delete that procedure from the regulations because it agrees that the "regulation is unworkable."[8/]

In issuing its most recent revision of the RCRA insurance regulations, EPA noted comments received on the draft regulations indicating "fairly wide-scale support for a Federal Liability coverage requirement for hazardous waste management facilities. There was virtually no opposition to such a requirement."[9] EPA also noted that it regarded these insurance requirements "as a desirable part of the RCRA regulatory program."[10] In explaining the gradual phasing in of the insurance for non-sudden occurrences, EPA indicated that "availability for non-sudden accidental occurrences was, and still is, limited (although increasing), ..."[11] EPA commented on the expansion of the insurance market as follows:

> The insurance market for coverage of non-sudden accidental occurrences has recently responded to increasing demand and there are good indications that this market can be expected to expand considerably in the near-future. After carefully considering this issue, the Agency has concluded that insurance for nonsudden accidental occurrences as required by these regulations will be available in a competitive market. However, this conclusion is based upon an expected expansion in the number of firms providing insurance for nonsudden accidental occurrences. Consequently, EPA will continue to monitor the development of the market to ensure that the requirements of this regulation can be met.[12]

The coverage of the insurance required by EPA has been defined in the regulations:

> The regulation now defines the bodily injury and property damage coverage required by this regulation to be the meaning given those terms by applicable State law. However, the terms do not include those liabilities which, consistent with standard industry practice, are excluded from coverage in liability policies for bodily injury and property damage. For example, the insurance policy need not cover injuries or damage caused by war, injuries covered by workers compensation or disability benefits, or intentional injuries. This action not only provides a more precise definition of the extent of coverage required but also establishes a limitation on the exclusions which may be in a policy used to satisfy the liability requirement. 13/

Thus, it should be noted, even though RCRA does not expressly provide for personal injury or personal property damage claims, the liability insurance coverage under RCRA is intended to cover all of the property damage and personal injury claims that will normally be brought under state law. This includes the claims likely to be brought in a plenary court action referred to as "Tier Two" (infra) in the Ninth Recommendations. To the extent that the same currently active waste facilities are regulated by RCRA and covered by CERCLA, it appears that certain claims for property damage cognizable under CERCLA might well be insured under the RCRA financial responsbility requirements.

Financial Responsibility Under CERCLA

Under §108 of CERCLA,[14] there are two separate financial responsibility requirements, one applicable to owners and operators of vessels, the other to other facilities. Owners and operators of vessels that carry hazardous substances must present evidence of financial responsibility, in accordance with regulations promulgated by the President. The required amount of coverage is $300 per gross ton of hazardous waste carried, or $5,000,000, whichever is greater. Failure to provide such evidence may result in the denial of clearance for any such vessel, but an owner of a number of vessels needs to supply evidence of financial responsibility only for the largest of them.[15]

The other requirement, applicable to other facilities--"for facilities in addition to those under subtitle C of the Solid Waste Disposal Act and Other Federal law,"[16] depends on Presidential rulemaking. As the law is phrased, there is no assurance, nor any immediate requirement, that the President must impose financial responsibility requirements. "Beginning not earlier than five years after" the enactment of CERCLA, the President is to promulgate requirements for the maintenance of evidence of financial responsibility for "closures of facilities" "consistent with the degree and duration of risk associated with the production, transportation, treatment, storage and disposal of hazardous substances."[17] The open-endedness of this required rulemaking "not earlier than five years" after the enactment of CERCLA is somewhat limited by the requirement that not later than three years after the enactment of CERCLA (i.e., by December 11, 1983), the President shall identify those classes for which requirements will be first developed and publish notice of such identification in the Federal Register. Facilities which prevent the highest level of risk of injury are to be accorded priority. The level of financial responsibility initially established shall, when necessary, be adjusted:

> to protect against the level of risk which the President in his discretion believes is appropriate based on the payment experience of the Fund, commercial insurers, courts, settlements and judgments, and voluntary claims satisfaction. To the maximum extent practicable, the President shall cooperate with and seek the advice of the commercial insurance industry in developing financial responsibility requirements.[18]

The law provides, moreover, that regulations promulgated are to impose financial responsibility requirements over a period of time, starting not less than three years and ending no later than six years after their promulgation. The final level of financial responsibility is to be achieved by incremental annual increases.[19]

A claim for cleanup or remedial costs under §107 of the Act may be asserted directly against the "guarantor"--i.e. the insurer. The insurer is to have the same defenses as the party insured, and may also assert the defense that the incident was caused by the insured owner or operator's own willful misconduct. However, the insurer may not raise any other defenses it might have been entitled to invoke in a proceeding brought by the owner or operator against the insurer.[20/] Unless he has acted in bad faith, the insurer is to be liable only to the extent of the policy limits, "and only to the extent that liability is not excluded by restrictive endorsement....."[21/]

CERCLA also imposed the obligation on the President to conduct a study to determine

> (1) whether adequate private insurance protection is available on reasonable terms and conditions to the owners and operators of vessels and facilities subject to liability under §107 of this Act, and (2) whether the market for such insurance is sufficiently competitive to assure purchasers of features such as a reasonable range of deductibles, coinsurance provisions, and exclusions. The President shall submit the results of his study, together with his recommendations, within two years of the date of enactment of this Act, and shall submit an interim report on his study within one year of the date of enactment of this Act.[22/]

The President delegated the task to the Department of Treasury, and the Interim Report became available in April 1982.[23] In addition to comments on the insurability of liability under CERCLA §107, it also combined in its coverage the report required by §107(k)(4)(A) on the feasibility of private insurance for the liability under the Post-Closure Liability Fund requirements.

The Treasury Department's very substantial report contains a general review of the nature of the risk, and of recent developments in the development of policies to underwrite pollution risks, calling special attention to new ISO (Insurance Service Office) and EIL (Environmental Impairment Liability) policies. The Report states that it is "probably safe to conclude that at this time the owners and operators...involved in hazardous substance activities have wide access to pollution liability insurance for sudden accidents."[24] The availability of insurance for gradual incidents is "notably increasing"[25] The Report states however:

> Nevertheless, serious problems do exist with respect to insuring pollution risks under recent CERCLA legislation. [26]
>
> The major insurability problem under CERCLA has to do with the particular combination of liability and financial responsibility provisions which tend to render the liability exposure of the insurer too uncertain for traditional underwriting practices. Specifically, liability under the statute appears to be "strict, joint and several"

> and "retroactive" in nature. In addition, "direct action" can be taken against the indemnifying party or the guarantor in lieu of the indemnified party. And in the event of direct action the normal contractual defenses or the guarantor vis-a-vis the indemnified party are set aside. Finally, if the insurer or guarantor is found not to be "acting in good faith" the monetary limits of the insurance policy or indemnity contract need not be binding, opening up the possibility of potentially unlimited liability for the insurer.27/

The Report also found a number of other problems facing the insurers, such as potentially conflicting and overlapping statutory requirements and lack of uniformity in the definitions of the different statutes and current insurance practices, including "the statutory claims settlement procedures, underwriting and risk assessment difficulties, the overall affordability and availability of insurance, and insuring the costs of monitoring and maintenance."28/

Overall, the Report foresees difficulties but few insuperable obstacles:

> On the basis of evidence available to date, it seems legitimate to conclude that both the marine and the property-casualty insurance markets have undertaken to respond to the growing need for pollution insurance coverage. Nevertheless, it is clear from the materials submitted for this study that both the providers and the purchasers of insurance have serious reservations about the "workability" of the liability regime attendant to CERCLA. On a preliminary basis, it is recommended that the monetary

> limits of the insurance policy or indemnity contract, or the relevant certificate of financial responsibility, be deemed binding, all other provisions of the legislation notwithstanding. Also, it is recommended on a preliminary basis that, to the maximum extent possible, a flexible approach be taken with respect to how owners or operators of facilities subject to CERCLA may fulfill financial responsibility requirements. 29/

With respect to the substitution of commercially purchased private insurance for the Post-Closure Liability Fund (PCLF) the Report concludes that such a substitution is not feasible now or in the foreseeable future. Such insurance coverage, in the view of the Report, would involve "uncertain and potentially unlimited exposure to liability," which would continue indefinitely. 30/

To foster private insurance participation in insuring post-closure liability, "a scaling back of the social goals implicit in the PCLF on the retention of industry financing of the PCLF or a similar government fund" would be necessary --i.e., some excess or coinsurance coverage provided outside of commercially available insurance. 31/

The Post-Closure Liability Fund under CERCLA takes over the owner-operator's responsibilities after the site has been closed in accordance with the requirements of RCRA. 32/ Thus, the obligations of the Post-Closure Liability Fund are continuous with the earlier obligations of the owner of the site. Under § 232 of CERCLA, the liabilities of the Fund are defined by CERCLA §107(k) and §111(j), neither of which provides for damages for personal injuries or loss of private property.

Under CERCLA § 107(k)(1), "the liability established by this section or any other law for the owner or operator of a hazardous waste disposal facility which has received a permit ... shall be transferred to and assumed" by the Fund. Thus, the Post Closure Liability Fund, constituted of taxes collected on the deposit of wastes, is designed to provide coverage for damages arising out of claims recognized by CERCLA itself, and it extends, perhaps, to other damages as well. It should be noted that CERCLA responsibilities extend to the consequences of past deposits of wastes -- i.e., they are in a sense retroactive. The recommendations of the Study Group relating to liability for personal injury and property damage claims are prospective only,[33/] and industry attitudes to a private insurance for post-closure liability are applicable to the insurance of prospective risks under the Study Group's recommendations only in a limited sense. An accidental occurrence after passage of the Tier One plan could manifest itself only years after closure in injuries or damages. If the Post-Closure Liability Fund is not available to compensate such injuries or damages, the victim may go uncompensated because there is no post-closure private insurance and because policies issued during the operating life of a facility were "claims-made."

Insurance Considerations Affecting the §301(e) Study Group's Recommendations

In order to meet its charge under §301(e), including the reference to insurance availability, the Study Group authorized one of its members to share, on a confidential basis, an early draft of its Report with selected and prominent members of the insurance industry. The purpose was to obtain some reactions, from the insurance point of view, to the major recommendations of the Report, particularly with respect to the first eight recommendations, on the establishment of the so-called "Tier One" remedy, an administrative compensation remedy for injuries from exposure to hazardous wastes. The Ninth and Tenth Recommendations, providing for "Tier Two" plenary tort action for personal injuries and for property and environmental damage, recommend no drastic changes in the common law, but the Ninth Recommendation is significant because of the difficult issue whether a claimant should be able to assert his claim in both kinds of proceedings and on what terms.

To explore the responses of insurers to the Recommendations, a meeting was arranged between members of the Study Group and a significant group of insurance specialists. Three members of the Study Group[34] and eight insurance specialists[35] participated in the meeting held on May 10, 1982. The response of the insurers to the Study Group proposal was very similar to the general tenor of the Treasury Department Report on the insurability of liabilities under §107 of CERCLA. While a number of difficulties and problems were addressed and objections raised to some of the features of the Recommendations, there was no assertion by the insurers that they could not, or would not insure the new liabilities that would be created under the Study Group Recommendations with some modifications. In addition to the oral exchange of views, several of the insurers commented in writing, both in the form of letters and memoranda, and some insurers provided access to other relevant materials.[36/]

A number of concerns expressed by the insurers had actually been addressed by changes in the recommendations prior to the May 10 meeting.

With respect to the entire array of recommendations relating to Tier One and Two, a recurring concern of the insurance specialists was the problem of the entry barrier between the two tiers. The view was expressed that a system that allowed free access to the plenary tort action after the claimant had already had a compensation award on Tier One would be prohibitively expensive from the insurance point of view. A system which called for a binding election between the tort remedy and the compensation remedy would be more readily insurable.[37/]

Another issue relating to both Tier One and Tier Two and their relationship to each other was the reliance on rebuttable presumptions in Tier One to establish causation. The concern was expressed by the insurers, parallelling the concerns of many members of the Study Group, that the presumptions at Tier One would be imported into the plenary action on Tier Two, thereby making it too easy for plaintiffs to recover very large verdicts in the common law actions. This fear also provided an ancillary reason for the insurers to support the binding election between Tier One and Two.[38/]

The particular rebuttable presumptions recommended to prove the compensation claim at Tier One also proved cause for concern. In the view of the insurers, the presumption of causation, upon a showing of the source, exposure to the source, and proof that "the claimant suffered death or the kind of injury or disease which is known to result from such exposure"[39/] was considered too open-ended. It was suggested that such a presumption would result in too many awards and in an excessively costly system. The presumption based on Toxic Substances Documents reflecting sound scientific findings[40/] was more hospitably received, and the insurers recommended that any presumption of causation be based on such Documents, if the Study Group remained committed to that approach -- as it has. As finally revised, the Study Group's recommendation is that proof of causation in Tier One be based on such Toxic Substances Documents whenever such documents have been prepared for the particular hazardous waste involved.[41/] The insurance specialists preferred that presumptions not apply to subrogation actions, since they wished to avoid any direct connection with what they regarded as their potential abuse.

A particular concern relating to Tier One had been substantially addressed before the May 10 meeting. Since claimants would be able to assert claims, under the applicable discovery rule,[42] for injuries resulting from exposures to hazardous wastes deposited many years ago, there would be an element of retroactivity in any subrogation claim arising out of an award of compensation. Such an element of retroactivity would create major problems of insurability. However, the Study Group had earlier decided that the element of retroactivity raised other substantial issues,[43] apart from insurability. The Study Group therefore had recommended that subrogation be limited to claims for compensation arising out of exposures to hazardous wastes deposited after the adoption of the compensation system.[44] Such deposits should have met the regulatory requirements of RCRA, and would thus present a lesser problem. To be sure, the adoption of a prospective subrogation rule does not resolve the problem of exposure to an active disposal site and the possible issue of whether the particular waste which gave rise to the claim was deposited before or after the adoption of the compensation plan. This is an unavoidable evidentiary issue, unless subrogation is to be abandoned altogether.

The Ninth Recommendation, relating to Tier Two plenary court actions, gave cause for concern even though it did not recommend significant changes in the tort law of the several states. The insurers indicated that linking a recommendation for the application of strict liability with recommendations for more liberal joinder rules, (and in an earlier draft, with proposals to apply such novel approaches as market share and enterprise liability) would adversely affect insurability. These more novel approaches had been abandoned prior to the May 10 meeting in favor of more traditional rules of joinder and apportionment of liability.

One of the major contributions to the Study Group discussion of insurance issues was a paper prepared by Richard Schmalz, Esq., an acknowledged leader of the insurance industry,[45/] representing the Hartford Insurance Group, entitled "Superfunds" and "Tort Law Reforms"--Are They Insurable?. The paper was particularly helpful because of its breadth and openness of approach to the general problem of finding new legal approaches to newly emerging problems, such as injuries from hazardous wastes. The author expressed the belief that "a Federal statute is the only feasible method of achieving the kind and scope of tort law reforms that are likely to remain insurable in private markets."[46/] Schmalz reviewed the origins of the Superfund Study Group in the Superfund legislation, and discussed the principles of liability for injuries arising out of private or commercial activities. Comparing the principles underlying established tort law and no-fault compensation systems, he noted:

> As we move from the concept of "fault" to "no-fault," we must be prepared to lower compensation levels or risk unmanageable costs.[47]

Commenting on compensation systems, Schmalz notes that in workers' compensation occupation disease claims, the causal connection between the work-related exposure and the injury is often hard to establish with certainty. This, in his view, (not universally held) has resulted in a trend towards easing the burden of proving the causal connection, which, in turn, has resulted in higher worker's compensation insurance costs,[48] citing the Federal Black Lung Act as an example of a run-away system.[49] He concluded that if we relax the causal connection requirement, "*we risk unmanageable costs even if benefits are sharply reduced below full tort compensation levels*[50]

Schmalz further asserted that the "predictability is essential for a system of private insurance operating under a market pricing",[51] recalling the insurance crisis in medical malpractice and product liability insurance when changes in tort law occurred.

Schmalz was critical of efforts to ease the burden of proof, and of the establishment of causal connections by imposing strict liability and creating presumptions. He would give more serious attention to the lawyer economists who are developing more predictable and comprehensive theories of accident law based on economic theory, so as to place liability for accidents on the cheapest cost avoiders; however he concedes that it may be difficult, if not impossible, to base tort liability compensation rules primarily on economically efficient allocations.[52/]

Noting the growing emphasis on the distributive objectives of social insurance and the weakening of the idea of moral culpability, he conceded that, "unfortunately there is not much chance of identifying any single, unambiguous, universally accepted purpose underlying the tort liability system."[53/] He therefore acknowledges an inevitable shift towards no-fault compensation,[54/] noting the substantial costs this development will continue to cast on American industry.

Schmalz rejects the idea that compensation systems based on strict liability to third parties provide an impetus toward accident prevention and cost internalization.[55/] In his view, the more the concept of individual responsibility and fault is eroded, the less effective is the transfer of loss as a spur to accident prevention. Thus, such a system can be justified on compensation grounds only.

The purpose, then, must be to find adequate resources to back a compensation system:

> Any compensation system is only as good as the financial resources behind it. Heavy reliance will be placed on some form of private or government insurance. If the present mood in Washington continues, there will be more interest in private solutions to the problem of making sure that adequate

> security is in place. If costs of the tort system escalate, the "private" solutions may look more like government sponsored quasi-private funds drawing their resources from special assessment or fees.[56]

Reviewing the private insurance market in the United States, he discusses the traditional liability policy in fields where traditional tort principles apply. He then speaks of first party coverage and the move towards group coverage, where fault is not a consideration in the determination of benefit eligibility. He notes that "the tort system has much higher frictional costs and compensation levels than first party insurance systems."[57] He notes that private insurance "has been able to accommodate strict liability as a substitute for negligence ... when there is a clear causal connection between a firm's activities and an accident."[58] He cites aircraft accidents as an example. He views the application of strict liability in the hazardous waste area as significantly different.

> *The insurance system begins to have serious problems when strict liability is imposed on numerous firms at the same time for the same injury, especially when the injury cannot be causally linked to any particular policy holder, time period or industrial activity.* The chaotic situation with respect to liability and insurance coverage for asbestos related injuries is a prime example of how marked shifts away from the requirement of clearly identified individual fault and causation as the basis for liability can create havoc for an insurance and industrial system geared to those principles. (Emphasis in original).

> The case for moving the tort liability rules for hazardous wastes even closer to liability without fault or specific causation rests largely on characteristics of the disposal of chemical wastes which are thought to be analogous to the handling of asbestos. There are many firms which have been engaged for many years in producing industrial wastes. Injuries often become manifest long after exposure. And, as far as we know, the injuries may just as well result from natural or other unidentified causes. At best there is a statistical indication of an increased frequency of injury over the rates observed under other conditions.
>
> We can expect, then, that a general easing of the loss shifting burden with respect to hazardous wastes will have the same effects on industry and insurance as those we are seeing in asbestos and black lung cases unless great care is taken to control costs and minimize impediments to a sound private insurance system. We believe there are some steps that can be taken to do this, although we pass no judgment on the wisdom of expanding tort liability remedies for hazardous waste disposal activities. [59]

In Schmalz's view, a possible solution would begin by placing strict liability "on one and only one firm at a time."[60] The purpose, in his view, is to improve the predictability of the tort tystem, to encourage insurance availability, and to reduce frictional costs. The means for accomplishing this purpose is "channelling". As prototypes for channelling, Schmalz draws on the Price-Anderson Act of 1957,[61] and on the Paris Convention of 1960 and the Vienna Convention of 1963, all of which cover similar ground, and all of which channel liability for extraordinary nuclear accidents onto one person, usually the operator of the nuclear installation where the accident occurred. This is accomplished by legislation which makes the operator of the installation the only party liable, thereby excluding duplicatory and expensive insurance coverage by anyone in the nuclear fuel cycle from production, transportation, utilization, to waste processing and disposal. Price-Anderson achieves channelling by requiring the operator to maintain liability insurance or other financial protection to cover not only the operator's liability but also that of any other person involved in the extraordinary nuclear occurrence.

Schmalz draws on the Paris Convention[62] to develop a channelling proposal for hazardous wastes. Just as in the nuclear situation, channelling is said to avoid the difficult problems of legal liability where there are many potential parties and cross actions, and to avoid the need for liability insurance for all potentially liable parties. The following system is proposed by Schmalz:

> The new system would require a Federal statute, perhaps modeled on the Price-Anderson Act, but with additional features. The major functions of the statute would be:
>
> 1. To identify the area of application --for example, the generators, disposal sites, and transporters of hazardous wastes.
> 2. To set the threshold above which strict liability will apply.
> 3. To set out the rules imposing strict liability on one and only one firm.
> 4. To set out the limits and means of providing financial protection.
> 5. To set an overall ceiling on liability at a reasonable level.
> 6. To set reasonable limitations on damages recoverable.
> 7. To establish exclusive liability under the Federal statute that is, to preempt state tort law. [63]

Schmalz anticipates very high levels of insurance, in the $500 million to $1 billion range, and anticipates a system of primary insurance by private insurers, and a secondary system of financial protection by "a participating plan financed by equitable contributions from all generators, waste disposal sites, and if desirable, transporters."[64/] The secondary level is viewed as a "stop loss" for the exclusively liable firm, spreading the excess cost as a form of enterprise liability.[65/]

Schmalz sees the normal insurance market as supplying most of the usual needs, with higher hazard activities covered by special coverage, channelled to a few licensed and clearly identified firms. He also views insurance pooling arrangements as possible, and necessary in the case of exceptionally high risk firms. Channelling would, in his view, reduce the enormous litigation cost of multi-defendant law suits.

One of the problems not addressed in Schmalz's paper is whether channelling can be reconciled with the current trend toward "claims made" policies. When liability is channelled to an operator who is protected by a claims made policy, many existing and valid claims may become uninsured some time after a policy expires, before a claim is made. A somewhat similar problem in the hazardous waste area is the problem of the long existence of ongoing, active sites. A channelling scheme would find it difficult to satisfy valid claims arising from past hazardous waste deposits.[66/]

Schmalz expresses the view, in closing, that "the trend of state law towards strict enterprise liability cannot be stopped."[67] It seems wiser, therefore, to work for a uniform strict liability system that will result in a greater part of the premium dollar going to injured persons. While accepting the inevitable, he urges a system of controls and limits on strict liability. None of these, it seems, runs counter to the Study Group Recommendations.

Conclusion

In a study of legal remedies for particular kinds of injuries, it is important to consider the availability of insurance coverage, because few risks in our society are carried solely by the person who causes them. Rather, liability insurance serves the dual function of protecting the responsible part against ruinous claims, .and the claimant against judgment-proof defendants. Liability insurance also serves the social ends of distributing risks -- and costs -- among the members of the group that have incurred similar risks. Liability insurance is also a device to pass the cost of accidents in socially necessary activities to the public at large, because the cost of insurance is ultimately reflected -- and paid for -- at least in part in the price of the goods purchased by the public.

It follows that it would be unreasonable, in our economic and social setting, to make changes in the law that create or enlarge legal obligations or liabilities without considering insurability and the availability of insurance protection at affordable rates. Having said that it would be unreasonable to recommend changes without a consideration of insurance consequences, it should be said, too, that insurability is not the sole or even the dominant factor that ought to determine whom the law protects and how. Whenever in the past proposals for changes in the law have been sensitive to insurance consequences, problems of insurance availability were ultimately resolved, and there is evidence that early fears in the field of insurance for hazardous waste sites under RCRA and CERCLA are, in the main, being resolved by increasing markets for appropriate coverage.

There is evidence that knowledgeable leaders of the insurance industry accept the current trend of legal developments toward greater reliance on strict liability and compensation remedies. Although insurance industry spokesmen prefer more stringent limitations on the availability of no-fault compensation remedies, industry attitudes to the First Tier compensation remedy recommended in this report was not entirely adverse. In the main, industry spokesmen appeared critical on certain matters of detail noted earlier, but they did not take the position that insurance coverage would not be available under any compensation system. Industry spokesmen clearly understood the prospective nature of insurance coverage that would be sought for Tier One and Tier Two, because the recommendations had eliminated retroactive applications by placing responsibility for past injuries from hazardous wastes on a compensation fund largely constituted by the oil and chemical feed stock industries. Moreover, insurance specialists also know that future deposits of hazardous wastes are less likely to give rise to injuries because they are regulated under stringent RCRA standards. The insurance specialists were troubled by the proposed reliance on presumptions, which, in thsir view, had been abused in other contexts.

A troublesome issue for insurers is the multiplicity of coverage by operators at different points of the chain, from generator of hazardous waste to transporter, and from transporter to operator of the disposal site. This multiplicity of coverage reflects current tort law and litigation practices, in that any party in the chain is likely to be sued under present rules relating to the apportionment of liability and damages. To resolve this problem, which also involves additional litigation and "friction" costs, some insurance industry spokesmen favor the "channelling" approach. Channelling may raise some novel issues of its own, but it may well be compatible with the Study Group's recommendations for the Tier One and Tier Two remedies, and it deserves further study.

PART III-B NOTES

1. Comprehensive Environmental Response, Compensation and Liability Act of 1980 ("CERCLA") § 107, 42 U.S.C. § 9607.

2. Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6924(6).

3. 40 C.F.R. § 264.141(f), as revised in 47 Fed. Reg. 16554 (April 16, 1982).

4. 40 C.F.R. § 264.147(a), as revised in 47 Fed. Reg. 16554 (April 16, 1982).

5. 40 C.F.R. § 264.147(b), as revised in 47 Fed. Reg. 16554 (April 16, 1982).

6. 40 C.F.R. § 264.147(b)(4)(i)-(iii), as revised in 47 Fed. Reg. 16555 (April 16, 1982).

7. 47 Fed. Reg. 16555 (April 16, 1982).

8. Id. at 16550.

9. 47 Fed. Reg. 16545 (April 16, 1982).

10. Id.

11. Id.

12. Id. at 16549.

13. Id. at 16548.

14. 42 U.S.C. § 9608 (1980).

15. 42 U.S.C. § 9608(a)(i) (1980).

16. 42 U.S.C. § 9608(b)(1) (1980).

17. Id. For an analysis of the relationship between RCRA and CERCLA requirements, see generally IA GRAD, TREATISE ON ENVIRONMENTAL LAW § 4A.04 (Supp. 1981).

18. 42 U.S.C. § 9608(b)(2) (1980).

19. 42 U.S.C. § 9608(b)(3) (1980).

20. 42 U.S.C. § 9608(c) (1980).

21. 42 U.S.C. § 9608(d) (1980).

22. 42 U.S.C. § 9651(b) (1980).

23. Dep't. of the Treasury, "Hazardous Substance Liability Insurance," (G.P.O. March 1982).

24. Id., Executive Summary at v. See also chapter 4 at pp. 77-79. Some of the policies available include the Water Quality Insurance Syndicate, Commercial General Liability, Environmental Impairment Liability, and Insurance Services Office Pollution Liability policies.

25. Treasury Report, supra note 24, Executive Summary at v.

26. Id.

27. Id.

28. Id. at vi. See also chapter 5 at p. 80 et seq.

29. Id.

30. Id.

31. Id. at vii. See also chapter 5 at pp. 110-12.

32. 42 U.S.C. § 9641 (1980). See generally IA GRAD, supra note 17 at § 4.02[k], p. 4-208 et seq.

33. See Seventh Recommendation, infra.

34. The Hon. Charles D. Breitel, George C. Freeman, Esq., Prof. Frank P. Grad.

35. Sally Kirkpatrick (Alliance of American Insurers), Harry Ball (Electric Mutual Liability Ins. Co.), Tom Harnett (The Travelers), Dick Schmalz (Hartford Insurance Group), Leslie Cheek (Crum & Forster). Susan Miller (Aetna Insurance), Joe Johnston (Drinker, Biddle & Reath), Ken Hall (General Electric).

36. Materials were submitted by, e.g., Richard Schmalz, Esq. and Susan Miller, Esq.

37. See, e.g., discussion accompanying the First Recommendation, infra.

38. See, e.g., Miller's Comments to Part IV (submitted to the Study Group May 1982), at 8.

39. See discussion accompanying the Fourth Recommendation, infra.

40. Id.

41. Id.

42. See Appendix B, infra.

43. See Appendix L, infra.

44. See the Seventh Recommendation, infra.

45. Counsel to Hartford Insurance Group.

46. Schmalz, "'Superfunds' and 'Tort Law Reforms': Are They Insurable," (submitted to the Study Group June 1982) at 2.

47. Id. at 7 (emphasis deleted from original).

48. Id. at 8.

49. Id. See also Miller, supra note 38, at 3.

50. Schmalz, supra note 46 at 8 (emphasis original).

51. Id. at 9.

52. Id. at 11. See also Meyer, Compensating Hazardous Waste Victims: RCRA Insurance Regulations and a Not So "Super" Fund, 11 ENVIR. LAW 689, 695 (1981).

53. Schmalz, supra note 46 at 13.

54. Id.

55. Id. at 14.

56. Id. at 15.

57. Id. at 17-18.

58. Id. at 18.

59. Id. at 18-19.

60. *Id*. at 19. For a discussion of alternatives, including trust funds, captive insurer schemes, insurance pools, self-insurance, posting of collateral, and surety bonds, *see* Cohen and Derkics, *Financial Responsibility for Hazardous Waste Sites*, 9 CAP. U.L. REV. 509, 514-18 (1980).

61. 71 Stat. 576 (1957) (codified as amended in scattered sections of 42 U.S.C.), as amended, 42 U.S.C. §§ 2014, 2210 (1981).

62. The English text of the Paris Convention of July 29, 1960 and the EXPOSE DES MOTIVES is included in SELECTED MATERIALS ON ATOMIC ENERGY INDEMNITY LEGISLATION (June 1965), 89th Congress, 1st Session, Printed for the use of the Joint Committee on Atomic Energy, Congress of the United States, at pages 256-290. The Paris Convention has been ratified by Austria, Belgium, Denmark, France, Federal Republic of Germany, Greece, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey and the United Kingdom. OECD, NUCLEAR LEGISLATION: ANALYTIC STUDY 11 (1982).

63. Schmalz, *supra* note 46 at 29.

64. *Id*. at 30.

65. *Id*. at 31.

66. A channelling scheme makes one party liable for all resulting injuries, for example, in the case of the nuclear industry, the operator of the plant. Insurance is obtained by that party from both private insurance companies and, possibly, from a participating plan financed by equitable contributions from other parties (e.g. transporters) whose acts may have caused or contributed to the risk of injury.

A claims-made policy provides coverage for claims make within a specified period of time following termination of the policy. For example, under the Price-Anderson program, the nuclear pools offer discovery periods up to twenty years after policy termination.

A problem develops when exposure resulting in injuries occurred prior to the effective date of the channelling proposal as a result of the acts of a party released from its insurance obligations as a result of channelling to another party. The victim may not be able to recover from the now uninsured party. The party to whom liability has been channelled may not be insured for exposures prior to the onset of channelling, despite its claims-made coverage. Only a properly drafted combination of channelling and claims-made policies will be certain to overcome this difficulty.

See generally Reyners, Compensation for Nuclear Damage in the OECD Member Countries, in MacNeil, ed., COMPENSATION FOR POLLUTION DAMAGE (1981); also found in 20 NUCLEAR LAW BULLETIN 50 (1977); OECD, NUCLEAR LEGISLATION: ANALYTIC STUDY (1976).

Commentators have suggested channelling in connection with a variety of high risk activities. See, e.g., BARAM, ALTERNATIVES TO REGULATION: MANAGING RISKS TO HEALTH, SAFETY AND THE ENVIRONMENT 201-233 (1982); Ferreira, Promoting Safety Through Insurance, in Bardach and Kagen, eds., SOCIAL REGULATION: STRATEGIES FOR REFORM 267, 276-277 (1982).

67. Schmalz, supra note 46, at 33.

IV. RECOMMENDED REMEDIAL APPROACHES, FEDERAL AND STATE

Introduction

The Study Group has reviewed existing statutory and common law remedies to provide compensation to persons who have suffered personal injury or property damage as a result of exposure to hazardous wastes, and the Study Group has also reviewed existing barriers to recovery. The Study Group concludes (1) that there are causes of action on which to base a claim for damages for such injuries or damage; (2) that there are many substantive and procedural barriers to recovery; and (3) that existing causes of action and existing barriers to recovery will allow some recoveries in a number of highly selected cases. Available remedies are inadequate in view of the substantial number of claims that may arise, and the factual and legal complexities that will be involved in their litigation. To put it differently, the existing legal remedies and actions may be adequate in spite of existing barriers, to deal with very large claims. The system is inadequate, however, to deal with the possibility of mass torts, or multiple exposures, and with claims by hundreds of victims, each of whom suffered a few thousand dollars in damages, unless procedures are found, not readily available at present, to join or combine such small claims. The smaller number of very large claims which will be handled, most probably, on a contingent fee basis, will permit the kind of detailed trial preparation and the detailed marshalling of highly complex, scientific and medical evidence, and will warrant the very substantial cost of such trial preparation. The substantial damages at stake will also warrant the lengthy trials and the lengthy litigation delays inevitably involved in such litigation. Such extended plenary court actions may not only result in very substantial judgments, but will also produce damages for pain and suffering, and recoveries for loss of earnings without the imposition of an upper limit.

Accordingly, the Study Group finds that there is a need to provide two kinds of legal remedies for injuries resulting from exposure to hazardous wastes. One remedy, here referred to as the "Tier One" remedy, an administrative compensation remedy, is designed to meet the need for an efficient and speedy remedy for the emergence, either of mass injuries, growing out of the simultaneous, or near-simultaneous exposure of numerous persons to a particular hazard, or for the emergence, within a short time span, of many cases with diseases that have remained latent for many years, that are likely to be "discovered" within a relatively short time. The barriers to recovery and problems encountered in tort actions would place a substantial, unwarranted strain on the judicial system, and would, by the same token delay if not defeat the victims' right to recover for their injuries. The "Tier One" compensation system is a risk-sharing system similar in its approach to such older, employment-related, insurance systems as workers' compensation. The need for such a compensation system depends on the number and nature of injury cases in the future, and if regulation under RCRA is effective, there is hope that there will be few cases of injury from hazardous waste in years to come. The recommendation for the compensation remedy is based on the possibility and concern that past hazardous waste disposal practices may have created a backlog of injuries and exposures that the legal system will need to clean up. This judgment of the hazard and of the need for remedies is a judgment the Study Group shares with the Congress that enacted CERCLA.

The Recommendations and discussion which follow will first address the "Tier One" federal compensation remedy, and then the "Tier Two" remedy, consisting of a continuation of the existing plenary state court actions with some recommended substantive and procedural modifications.

First Recommendation: Federal Administrative Compensation and State Judicial Remedies

In light of the limited availability and the inadequacy in many situations of existing remedies, and particularly in light of the inadequacy of the present tort system to deal with relatively small claims, the Study Group recommends a remedial program that is intended to provide means of recovery for victims of exposure to hazardous wastes, utilizing both administrative and judicial remedies, as may be appropriate.

In broad outline, the Study Group recommends a two-tier system of remedies. The first tier, which is expected to be the part of the system most heavily relied on by persons injured by exposures, will provide an administrative compensation remedy without a showing of fault. The administrative compensation scheme would be established by federal legislation, but would be operated largely by the states pursuant to federal law. Its major purposes would include the provision of limited compensation to meet the economic and medical needs of persons injured in a manner which is more prompt and less costly than tort litigation. Such a compensation system would also provide a useful method of cost allocation and sharing, and a socially responsible method of internalizing the emerging costs of industrial and technological development.[1]

The second tier would keep intact the existing system of tort law in the several states, with some recommendations for procedural and other improvement. It is expected that these traditional, established judicial remedies will be used less frequently because of the difficulties of recovery under existing tort remedies (including negligence, trespass, nuisance and strict liability), because of the evidentiary burdens and costliness of scientific and medical proof, and because of such practical obstacles as delay and the high cost of litigation. The plenary judicial action under existing tort law, unlike the compensation remedy, provides the usual unlimited damages in tort, including full recovery for loss of earnings, medical expenses, and pain and suffering. As is usually the case in established tort actions, the plaintiff who seeks the unlimited recovery also faces greater uncertainty and greater evidentiary burdens than the person who recovers under the administrative compensation remedy.

The Study Group was unanimous in recommending the two-tier approach, and it was also unanimous in its recommendation that the amount of any compensation award recovered by the claimant on Tier One be deducted from, and be paid back out of, any judgment or settlement recovered in a Tier Two plenary action, if both tiers are to be available to the claimant.

The Study Group, by a 9 to 3 vote, agreed on the recommendation that a claimant who has obtained a compensation award in Tier One should be free to bring a plenary action in Tier Two. However, if such a plenary action results in a judgment or settlement which does not exceed the total amount of the compensation award by 25 percent or more, the judge should have the discretion to assess the costs of the plenary action and the costs of expert witnesses against the plaintiff. In exercising this discretion, and in assessing the amount of these costs against the plaintiff, the judge should consider whether the plaintiff's action was brought in good faith, keeping in mind that the purpose of this provision is to avoid frivolous and duplicatory law suits.

In making these recommendations for legal remedies the Study Group wishes to emphasize that in its view, technological solutions should be advanced so as to prevent the future generation of hazardous wastes and avoid the disposal of toxic substances whose persistence will extend hazardous waste problems into an indeterminable future.

Discussion

The Tier One broadly available administrative compensation remedy is recommended because of the desirability of an effective, speedy remedy, needed for the possibility of mass injuries with long latency periods emerging gradually during the next ten to thirty years from earlier exposures. Such a remedy might also lessen the degree of opposition to the siting of needed hazardous waste facilities, though it was also clear in the Study Group's discussions that a technological solution that would stop the generation of such substances or that would render them harmless, thus avoiding future disposal of hazardous wastes would be preferred. In passing CERCLA in 1980, the Congress acted on the basis of limited information and evidence of substantial risk. Now, some 18 months after the passage of the Superfund legislation, some more evidence of hazard has become available, though it too is inconclusive, compelling the Study Group to make its recommendation on remedies for personal injuries on the basis of an evaluation of the risks similar to the evaluation of risks by Congress in passing CERCLA.

While the evidence of personal injury from exposure to hazardous waste dumps or disposal sites that has been referred to earlier[2] is sketchy and difficult to quantify, it nonetheless points to the major risks of toxic chemicals and hazardous wastes; to inadequate attention, over many years, to what are now regarded as better, if not sound hazardous waste disposal practices, and to the fact of past exposures of substantial populations to contaminated water supplies, to contaminated soils and to airborne vapors and emanations. While there are as yet few reported decisions involving injuries from hazardous wastes, the available evidence points to a potential for the emergence of many cases, as in the asbestos,[3] diethylstilbestrol,[4] and Agent Orange[5] situations. The possible emergence of many hazardous waste cases, caused by a vast variety of chemical wastes, may create the kinds of evidentiary problems of mass litigation and consequent overloading and congestion of the courts which would be unacceptable to the persons injured and to the society as a whole.

The retention of the established system of plenary tort actions on Tier Two would continue to serve the same values served by tort law generally[6]— the vindication of personal and societal rights by law suits that assess liability in direct relationship to personal responsibility for harm, and that, relying on such an assessment of liability, impose larger judgments for damages that include damages for pain and suffering and a full measure of loss of earnings. In relying on such an assessment of liability, it is said that such plenary actions also serve the purpose of emphasizing reasonable care and discouraging carelessness. The second tier of plenary tort actions is likely to involve fewer and larger cases than the first tier, because the plaintiff will have to be in the position of waiting out the slow process of litigation until the judgment makes him financially whole. Moreover, the complexity and sophisticated evidentiary problems in such cases will call for representation by thoroughly trained and experienced lawyers who are not likely to accept the smaller cases, however valid the claims[7].

The Study Group spent a considerable amount of its time addressing the choices for allowing a claimant to proceed on either tier or on both. One choice provided for a binding election between Tier One and Tier Two; another choice provided for free access by claimants to both tiers[9]. There was considerable sentiment in favor of liberality and free choice, and the notion that an impecunious claimant in need of rapid compensation should not be compelled to give up his right to a plenary action to gain the immediate benefit of the compensation that he may need to sustain himself and his family. This sentiment was countered by the view that to provide a plenary tort remedy on top of a broad compensation remedy would make the system unacceptably expensive and thus ultimately unworkable. The argument that cumulative remedies would lead to excessive costs was in turn denied because it was unlikely that a claimant who had already received a rather generous compensation award would seek an additional tort recovery, all the more since few personal injury lawyers would take such a case except in the unlikely event that substantial additional damages could be recovered. On the other hand, it was argued that there was nothing to stop a claimant from seeking to cumulate remedies, and that the reduction of the tort recovery by the amount of the compensation award received earlier would not be sufficient to discourage a claimant who had already received compensation from trying his luck in a plenary action. It was urged, too, that adding the severity factor of substantial tort recoveries to the costs of a broadly available compensation remedy would cumulate the most expensive features of both systems -- a point that was both disputed and supported by reference to the "add-on" features of a number of automobile no-fault systems.[10]

Nine of the twelve members of the Study Group, as a compromise, agreed on the recommendation that follows (five members indicated that they would prefer binding election between Tiers One and Two, two favored such binding election if the benefits would be increased substantially, and four members voted against any access limitation between the Tiers; one member indicated "neither" as his choice). The compromise chosen recommends that claimants be allowed access into either tier, so as not to compel a claimant to give up his plenary tort remedy because of his immediate and pressing need for compensation. On the other hand, to protect the economic feasibility of the system, it was considered necessary to assure that the claimant would not cumulate remedies unnecessarily by gambling on a more substantial tort recovery after he had obtained a compensation award. To avoid such a gamble, it was recommended that a claimant who does not recover at least 25 percent more in the plenary tort action than in the compensation proceeding, be subject to assessment of the court costs and of the cost of expert witnesses. Such an assessment, to be made at the discretion of the judge in the plenary court proceeding, is to take into account whether the plaintiff's action was brought in good faith, with a view of avoiding frivolous and duplicatory proceedings.

A claimant who brings a plenary court action after he has obtained a compensation award should be deemed to have waived the right of judicial review of the compensation award, and the earlier compensation award should not give rise to any collateral estoppel in the later plenary court action. The reference in such court action to the earlier compensation proceeding should be regarded as improper and grounds for the declaration of a mistrial.

The discretionary assessment of costs and of the expense of expert witnesses to discourage needless or bad faith duplication of procedures was suggested by similar provisions in California law which allows trials de novo after mandatory participation in judicial arbitration proceedings for claims below a set amount.[11] In substance, the recommendation avoids an entry barrier between Tier One and Two, but imposes a sanction for the abuse of the system by claimants who gamble on Tier Two when the Tier One remedy has met all of their reasonable claims. The discretionary imposition of this sanction is in addition to, and independent of, the provision that the earlier compensation award be deducted from the amount of judgment or settlement in the plenary tort action, and that it be paid back to the compensation system in order not to deplete the compensation fund, leaving full damages to be paid in Tier Two.

Towards the close of the Study Group's deliberation, another proposal emerged, supported by several members of the Group, whose views are incorporated in a comment following this Report. Briefly, it was proposed that compensation awards at Tier One be increased substantially, so as to take into account non-pecuniary losses that are difficult to quantify--such as disfigurement, loss of ability to procreate, and some aspects of damages treated as general damages or under the rubric of pain and suffering in plenary actions. The examples of the systems of scheduling compensation under New Zealand and Australian legislation were relied on, as set forth in J. O'Connell and R. Henderson, in Tort Law, No-Fault and Beyond, THE FUTURE 696, 704-10 (1975). To make up for this greater liberality of compensation awards at Tier One, it was proposed that the judge in any subsequent effort to recover at Tier Two exercise greater discretion and control in allowing or barring access to that tier. It was the minority view that the barrier between Tier One and Tier Two in the Study Group majority recommendation is not severe enough to avoid "gambling", that is, obtaining easy recoveries at the administrative level, and then pursuing the plenary action. To make up for this lack, it was suggested that a discretionary system for judicial approval be established, allowing access to Tier Two only on a showing under described standards that there was good cause that the claimant did not believe he or she had, or was likely to have, sustained the more serious injuries for which he or she was claiming on Tier Two. The test for access to Tier Two was analogized to the rigorous application of the doctrine of mistake applicable to setting aside a general release in a personal injury claim. The proposal was criticized by some members of the Group on the grounds that the increased scope of compensation awards would defeat the Tier One compensation system by making it too expensive. Other members of the Group took the view that the standards for access to Tier Two were too difficult to define under the proposal, while others viewed the proposed access barrier as entirely unacceptable.

Second Recommendation: Tier One -- A New Federal Administrative Remedy for Injuries from Exposure to Hazardous Wastes

The Study Group recommends the establishment by federal law of an administrative compensation system to compensate persons injured by exposure to hazardous wastes, as such exposure is here more particularly defined. The system, to be established by federal law, is to be administered by the several states in accordance with the provisions of the federal law.[12]

The purpose of the new compensation system is the protection of persons injured by exposure to hazardous wastes through the creation of a speedy and effective remedy that will provide full coverage of medical expenses, and substantial, though limited, coverage for loss of earnings.[13]

Exposures to hazardous wastes to be covered by the plan include exposure to hazardous waste sites, by contact with contaminated soils, inhalation of vapors and other emanations from such sites, and the ingestion of hazardous wastes in contaminated water supplies, contaminated by leaching or other infusions from such hazardous waste sites, or by spills from such sites. Included in such covered exposures shall be injuries resulting from the transportation of hazardous wastes and injuries resulting from any hazardous substance spill. A proper line should be drawn between injuries from hazardous wastes as covered by CERCLA, the Superfund legislation, and injuries not so covered, such as hazardous air pollution emissions under the Clean Air Act, or hazardous effluents regulated under the Clean Water Act. The legislation that establishes the compensation system should indicate clearly that the system of compensation for personal injuries is coextensive with the system established by CERCLA for the cleanup of old sites, the cleanup of spills, remedial steps, and for the consequences of transportation accidents. The purpose is not to create a compensation remedy for all private injuries from environmental pollution, but only for those that involve the disposal, transportation and management of hazardous wastes.[14]

Another exclusion which should be set forth in the legislation is of occupational exposures. The Study Group does not recommend that the proposed compensation plan take over any of the functions of the state workers' compensation law. A person who is employed in hazardous waste disposal activities, either in the transportation of hazardous wastes or in a hazardous waste site, who suffers injury or disease growing out of his employment should look to available remedies, rather than to the new compensation remedy here proposed.[15]

Discussion

The Recommendation seeks to define the scope of the compensation remedy. Its purpose is not to compensate for all exposures to environmental pollution, but to limit the remedy to exposures related to injuries and disease resulting from exposure to hazardous waste, whether in the course of disposal, in the transportation of hazardous wastes, or resulting from hazardous waste sites. The intention of the proposed compensation plan is a limited coverage related to the kind of hazardous waste exposures covered in CERCLA.[16]

As noted in other parts of the Report, CERCLA deals with hazardous substances that have entered the environment in the form of wastes and spills. Thus, the compensation plan is not intended to deal with injury from exposure to hazardous substances generally, which are not addressed by CERCLA. The purpose of the compensation plan is to compensate for the adverse consequences of improper disposal, improper transportation, spills, and improperly maintained or closed disposal sites.

Such a new compensation system would also provide a mechanism for providing compensation for personal injuries caused by past disposal of hazardous wastes at "abandoned" or "orphan" sites. By definition, no adequate means of compensation currently exists for this limited class under either state or federal law.

Third Recommendation: Tier One -- Establishment of the Claim for Compensation; Filing of Claim; Causation; Presumptions

The Study Group recommends that the "Tier One" compensation be based on a simple claims procedure. To be eligible for a compensation award, the claimant must file the claim no later than three years after he has discovered or should reasonably have discovered, the injury or disease and its cause, whether such discovery occurred before or after the effective date of the federal law establishing the compensation plan. The essential elements to establish a claim should consist of proof of exposure, proof of the disease or injury, and proof of causation -- i.e., proof that exposure and disease or injury were causally connected, and, finally, proof of compensable damages. It is further recommended that proof of causation include reliance on appropriate rebuttable presumptions.

Discussion

Filing of Claim

This Recommendation applies the discovery rule to the filing of compensation claims. The claim must be brought three years after the disease or injury and its cause were discovered or reasonably should have been discovered, and includes claims discovered shortly before the effective date of the plan so as to include a limited number of claimants who would be without a remedy unless covered in this fashion. The purpose is to include recent victims of exposure whose need gave rise to the development of the remedy.

Proof of Exposure

The evidence to prove exposure might include such elements as the nature of the exposure, including skin contact, ingestion or inhalation, and duration of exposure to the type of chemical substance or hazardous waste that is known to cause injury.

Proof of Disease or Injury

Evidence to show disease or injury will involve medical testimony based on medical records and on physical examination and clinical tests of the claimant. Proof of disease may present certain difficulties because of the relative recency of the recognition and diagnosis of hazardous waste-linked illnesses. There is an increasing number of diseases, however, that can be attributed to exposure to toxic substances, and the disease registry established under the CERCLA should help to ease the diagnostic problem.[17]

Proof of Causation

Proof of causation is one of the major obstacles faced by a plaintiff in a court action for exposure to hazardous waste. As noted earlier, a plaintiff faces a substantial burden of adducing complex scientific and medical testimony to relate the exposure to the disease. Such testimony requires the production of highly qualified and highly paid expert witnesses, and it may also require the preparation and production of detailed epidemiologic and statistical materials. The necessary proof of causation is not only complex, but it is likely to be very expensive. It would clearly be too expensive to warrant the litigation of many cases, except fairly large ones, and this is one of the major reasons for relying on a compensation system rather than on judicial remedies.

The problem of proof of causation may be eased by the use of rebuttable presumptions, and the Study Group recommends the use of rebuttable presumptions in administrative compensation proceedings. The purpose of such presumptions is to ease the claimants' burden of proof with respect to causation, and to ease the economic burden -- both on the claimant and on the system -- of the often repetitive introduction of complex scientific and medical evidence to link particular diseases with recurring or multiple exposures of different claimants to certain hazardous wastes.

The use of rebuttable presumptions is discussed at length in the Fourth Recommendation. Our Recommendation that such presumptions are not appropriate in the plenary action in Tier Two, and different views on that issue are commented on in the Fourth[18] and Ninth Recommendations.[19]

Fourth Recommendation: Tier One -- Rebuttable Presumptions

The Study Group recommends that legislation establishing the compensation system provide for two kinds of rebuttable presumptions; the first extending merely to the issue of causation, the second going beyond proof of causation into such issues as the nature and extent of the disease or injury resulting from exposure to hazardous wastes. The first set of presumptions would be based on the proof of several elements which then give rise to rebuttable presumptions of causation. The second set of presumptions should be based on the proof of the same elements as well as on previously prepared and adopted "Toxic Substance Documents" based on scientific data that link the exposure to certain designated hazardous wastes to their known effects in causing injury or disease. The second set of presumptions would also meet additional elements of proof.

In both instances, the same basic showing should be made. If the claimant in an administrative compensation proceeding proves:

1) that the source involved in the claim was engaged at the time of exposure in the production, transportation or disposal of hazardous wastes; and

2) that the claimant was exposed to such hazardous waste by proximity, contact, ingestion, inhalation, or by some other form of exposure; and

3) that the claimant suffered death or the kind of injury or disease which is known to result from such exposure then the following rebuttable presumptions should arise:
(a) that the exposure to the hazardous waste generated, transported or disposed of, by or in the source, contributed to the death, injury or disease of the claimant; and
(b) that the source by or in which such hazardous wastes were generated, transported or disposed of was responsible for the claimant's exposure and for the resulting death, injury or disease.

In the rebuttable presumption set forth above, to show that death or the kind of injury or disease suffered by the claimant is "known to result" from such exposure, a Toxic Substance Document (as described *infra*) shall be relied on, if such a document has been prepared for the specific hazardour substance or waste.

In addition to these basic presumptions, additional presumptions may apply if the federal agency authorized to administer the compensation system (which will be operated by the states subject to federal statutory requirements), has issued documents to provide evidentiary data showing that specific hazardous substances or wastes cause specific diseases or illnesses.

Such documents, here referred to as Toxic Substance Documents should be prepared by the agency on the basis of scientific data, including its accumulated information on particular hazardous wastes or substances, collected in connection with the administration of the Clean Air Act (CAA), the Clean Water Act (CWA), Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), Resource Conservation and Recovery Act (RCRA), Toxic Substances Control Act (TOSCA), Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), as well as the Occupational Safety and Health Act (OSHA), and on the basis of evidence collected in connection with past or pending cases. The Agency should produce Toxic Substance Documents for some of the best known 20 or 30 hazardous substances on which data are available, including dioxin, chromium, kepone and PCB, and that the Agency could add Toxic Substance Documents from time to time for additional hazardous substances or wastes as their danger becomes more evident, and as data become available. A Toxic Substance Document should be adopted following the publication of the proposed document, together with all supporting data and materials, set forth in full or by reference to published scientific papers, and should be adopted and promulgated following an opportunity for comment.[20] An appropriate rulemaking procedure should be followed to assure the scientific accuracy of the results.

For each hazardous substance or waste, the applicable Toxic Substance Document should set forth the following:

1) Elements of exposure including

a) nature of exposure, such as skin contact, ingestion, inhalation;

b) level of exposure, stated, where appropriate, in terms of a range of exposure levels expressive of the intensity of the exposure measured, when appropriate, by ambient concentration;

c) duration of exposure, expressed, where appropriate, in terms of a range of time periods of exposure.

2) The disease or diseases resulting from exposure, including data on:

a) the etiology of the disease, as related to nature, level and duration of exposure;

b) the symptoms of the disease and the available methods for its diagnosis, including direct observation, clinical and other diagnostic tests;

c) the latency period, if any, of the disease, as related to the nature, level and duration of exposure;

d) the prognosis for the disease, including the anticipated course of the disease, its treatment and its impact or duration in terms of disability, reduction or loss of function, and reduction of life expectancy;

e) other impacts, including mutagenicity, teratogenicity and carcinogenicity in the progeny of the person exposed.

3) Other parameters relating to exposure, etiology and the course and consequences of the disease, including aspects of susceptibility and their variation depending on such factors as age and sex and such other conditions as pregnancy, or disease from causes other than exposure to the hazardous wastes or substances involved.

When a Presumption Document has been prepared for a particular hazardous waste, upon proof of exposure, source and proof of the occurrence of death or disease -- as in the case of the rebuttable presumption of causation --additional rebuttable presumptions shall apply as to matters of exposure, etiology, prognosis, nature and duration of the disease, insofar as these matters are covered in the Toxic Substance Document and insofar as they may be relevant or material to the claim.

Discussion

1. The Recommendations

A majority of the Study Group was in agreement on the need for reliance on rebuttable presumptions on the First Tier, as part of the compensation remedy. The Study Group was in general agreement that the rebuttable presumptions here recommended for the Tier One compensation remedy are inappropriate for the Tier Two plenary tort action. Several members of the Group expressed strong doubts on the desirability of statutory presumptions, and some members suggested that in a plenary action rebuttable presumptions created more evidentiary barriers for the plaintiff than they resolved.

There was considerable discussion and concern whether the Tier One rebuttable presumptions might not be applied, albeit inappropriately, in Tier Two by way of common law developments. Concern was expressed, too, that the use of the rebuttable presumptions in Tier Two might unduly facilitate recovery of judgments in the plenary action, encouraging more claimants to choose Tier Two over Tier One, thereby undercutting the compensation remedy. (*See also* Ninth Recommendation, (d) Proof of Causation and Related Evidentiary Problems; Presumptions, *infra*.)

The Statement of the presumption does not impose on the claimant the obligation to disprove that he smokes or drinks coffee with saccharine, or engages in similar, potentially harmful activities.[21] In support of the broad presumption of responsibility, earlier presumptions may be cited which have been used and upheld in the Workers Compensation and Black Lung Disease area. The general rebuttable "presumptions of compensability" in workers' compensation laws serve the purpose of ruling out claimant's own physical weakness or habits as a contributing factor.[22]

Some members of the Study Group expressed concern over the breadth (and insurability) of the rebuttable presumption, particularly with relation to the broad showing "that the claimant suffered death or the kind of injury or disease which is known to result from such exposure..." While a more restrictive statement of the basis for the presumption could be articulated, a majority of the members of the Study Group concluded that such a narrower statement would give rise to difficulties of interpretation and was not likely to result in any significant change in applying the rule. It was agreed, however, that as soon as an appropriate Toxic Substance Document for the particular substance is adopted, the proof of injuries "known to result from such exposure" would rely on such a document. Some members felt that the rebuttable presumptions recommended are too broad and could lead to over liberality and abuse in their application. In response, it was noted that the broad scope of the rebuttable presumption is workable because this element of the presumption is rebuttable to the same extent as all other elements.

II. Legal Aspects of Reliance on Rebuttable Presumptions

A. Purpose of Presumptions

Courts and legislatures create presumptions to shift the burden of proof for a variety of reasons. Some are created to correct an imbalance resulting from one party's superior access to evidence.[23] Another rationale, usually implied rather than explicitly expressed, is to favor certain parties or claims for social and economic reasons by giving them the benefit of a presumption, usually to restore balance between parties. The disfavored adversary is correspondingly handicapped.[24] Yet another reason is that of practical convenience in the disposition of controversies.[25]

In the creation of presumptions, a reasonable judgment of probabilities is the most important consideration. This plays a strong part in the establishment of presumptions to aid the claimant injured by hazardous wastes to meet his burden of proof in a compensation proceeding. In certain recurring fact situtations, proof of fact A renders inference of fact B so probable that it is sensible and time-saving to presume the truth of fact B until the adversary disproves it.[26]

B. Operation of Presumptions in Civil, Including Administrative Proceedings: The Morgan and Thayer (F.R.E. 301) Approaches

Although the following discussion of rebuttable presumptions is addressed to judicial proceedings (because presumptions have been discussed in the literature primarily in that context), it is equally applicable to administrative proceedings, where such presumptions have been frequently used.[27]

All commentators agree that a presumption has the procedural consequence of shifting the burden of proof, though the weight of that shifted burden will often turn on the relative strength or weakness of the factual evidence on which the presumption is predicated. There are, however, two aspects of the burden of proof; the burden of production and the burden of persuasion. The two major approaches regarding how presumptions should operate - the Morgan approach and the Thayer "bursting bubble" approach adopted in F.R.E. 301 - differ in the manner in which they shift those two aspects of the burden of proof.

The approach favored by Professor Morgan and the Advisory Committee for the Federal Rules of Evidence would shift both the burden of production and the burden of persuasion to the opponent. The presumed fact would have to be found once the basic fact was established, unless the opponent persuaded the fact finder of its non-existence. Therefore, if a presumption existed that persons who were exposed to a particular hazardous waste and contracted a particular disease were presumed to have contracted the disease as a result of exposure, the presumed fact would be considered as established, unless the opponent persuaded the trier of facts of its non-existence.[28] The 1974 Uniform Rules of Evidence and several states have adopted this approach.[29]

The Congress rejected the Morgan approach, however, and instead turned to the Thayer approach when it adopted the Federal Rules of Evidence in 1974. The Thayer or "bursting bubble" approach, embodied in F.R.E. 301, shifts only the burden of production. A presumption is overcome and disappears from a case (thus bursting the bubble) once the opponent of the presumed fact (B) introduces evidence which would support a finding of the non-existence of the presumed fact. The burden for the opponent is not very great; he must merely have "enough evidence before the jury so that a reasonable jury could be convinced that the contrary of the presumed fact is true."[30] This would be a question of law for the judge to decide.[31] In an administrative proceeding, the entire decision would, of course, be that of the hearing officer or administrative judge.

Thus, a presumption also has the effect of forcing the opponent of the presumption to produce enough evidence to avoid a directed verdict,[32] or in an administrative proceeding, the dismissal of the claim. When the presumption disappears, the court may instruct the jury that it may still infer fact B from fact A, but the court cannot instruct the jury that it may presume the existence of fact B from fact A. Under the Thayer approach, in the hypothetical discussed above, if a defendant chemical company offered enough evidence to support a verdict that the plaintiff's injury was not caused by exposure to its hazardous wastes, the court could not instruct the jury to presume that the injury was caused by the exposure. In an administrative claim proceeding for compensation, the hearing officer would himself go through the same process, as would a judge sitting without a jury.

Constitutional Limitations Upon the Creation and Effect of Presumptions in Civil Proceedings

Constitutional limitations on the use of presumptions differ in civil proceedings and in criminal cases. The use of presumptions in criminal prosecutions is not relevant here.

(1) Civil and Administrative Proceedings

Although the Supreme Court in 1929 declared unconstitutional a Georgia statute with a Morgan-type presumption in Western & A.R.R. v. Henderson[33] (presuming liability on the part of the railroad for damages done by the running of locomotives), the Advisory Committee to the Federal Rules of Evidence believed that it was safe to ignore the Henderson case and that no constitutional prohibitions bar the adoption of a Morgan-type presumption.[34] In Henderson, the statute which established the presumption had been struck down on the basis of the "rational connection" test set forth nineteen years earlier in Mobile, J. & K.C.R. Co. v. Turnipseed[35] where a similar presumption, that utilized the Thayer approach was upheld. The Court there stated, "[I]t is only essential that there shall be some rational connection between the fact proved and the ultimate fact presumed, and that the inference of one fact from the other shall not be so unreasonable as to be a purely arbitrary mandate."[36] Henderson and Mobile are very difficult to reconcile; they utilized different approaches in the shifting of burdens, though the Court in Henderson did not distinguish Mobile on that basis. The Advisory Committee suggests that the Henderson outcome may partly be a result of a 1929 view of economic due process.[37]

Whatever the reason, there is little concern that the court today would strike down as unconstitutional an arguably reasonable presumption in a civil case. The Court recently upheld certain provisions of the Black Lung Act creating presumptions that exposure to coal dust is the cause of pneumoconiosis, a respiratory tract ailment.[38] Congress subsequently amended that statute to repeal some of the Black Lung presumptions for policy reasons, leaving others--as well as the rationale of the Supreme Court decision--intact.[39] Still, Weinstein and Berger caution:

> The non-relevance of the "rational connection" test to civil presumptions does not mean that there are no constitutional limits to what a court or legislature may accomplish via a presumption....Greater liability may not be imposed on a defendant by means of a presumption than could otherwise be imposed in consonance with due process and equal protection requirements

> [*e.g.*, a statute providing that all red-headed drivers involved in accidents are prima facie assumed to be negligent would undoubtedly be unconstitutional].[40]

More stringent rules, not relevant here, apply to presumptions in criminal proceedings.[41]

Selected Examples of Use of Presumptions in Administrative Compensation Systems, such as State Workers' Compensation Laws, the Federal Black Lung Act and Proposed Legislation in Earlier Hazardous Waste Proposals

A. Use of Presumptions in State Workers' Compensation Laws

In general, the claimant for workers' compensation has the burden of showing by a preponderance of the evidence that his injury arose out of his employment.[42] Many states, however, use a general rebuttable presumption of compensability to shift the burden of proof to the defendant.[43] Examples of this general presumption can be found in Massachusetts[44] and New York[45] law. A broad presumption of compensability may be important where there is evidence that the claimant's own physical weakness or illness was a contributing factor to the occupational injury or disease.[46] Some federal legislation, for example, the Longshoremen and Harbor Workers' Compensation Act, also includes this broad presumption.[47]

In addition to general presumptions in favor of coverage, some states have enacted more specific presumptions. One of the most common is that an unwitnessed on-site fatal accident is presumed to be work-related.[48] Another is that a work-related disability indefinitely continues to impair the claimant's ability to work[49] unless proven otherwise by a preponderance of the evidence.[50]

Less common is Mississippi's presumption that a heart attack sustained while on the job is work-related.[51] Some states have found that certain occupations often lead to specific diseases, and have based certain rebuttable presumptions on such findings -- i.e., that a heart attack sustained by a firefighter,[52] pneumoconiosis suffered by a coal miner[53] and respiratory disability experienced by a steel mill descaler or scarfer[54] are work-related.

B. The Federal Black Lung Act

The Federal Coal Mine Health and Safety Act of 1969[55] is the first federal workers' compensation statute. It provided compensation to coal miners who are totally disabled due to work-related pneumoconiosis. To be eligible for benefits, a claimant must show that he or she is a "miner" or dependent of a miner, who was "totally disabled" by "pneumoconiosis."[56] The burden of proof is upon the claimant to show he and his condition fall within the statutory definitions of these terms.[57] Since pneumoconiosis is defined as "a chronic dust disease of the lung... arising out of coal mine employment",[58] the claimant's burden of proof implicitly includes proof of work-relatedness.

To aid the coal miner in his claim, Congress had originally included five statutory presumptions, four of which were rebuttable and one irrebuttable.[59]

The Black Lung Act was amended in 1981,[60] particularly with respect to the repeal of three out of the five presumptions, which, in the later view of Congress, had led to an excessive number of claims and vastly greater expenditures than had been anticipated.

The 1981 amendment, however, retained the first and basic rebuttable presumption that established the work-relatedness of the pneumoconiosis. A miner who showed more than ten years of exposure and evidence of pneumoconiosis would be presumed to have contracted the disease on the job. The medical data which may be used by the claimant for his showing is defined by the Department of Labor regulation.[61]

The 1981 amendment also left unchanged an irrebuttable presumption. It states that evidence of "complicated" pneumoconiosis conclusively establishes that the miner is now or was at the time of his death totally disabled.[62]

It should be noted, in passing that although Congress did spell out some of the criteria for use of the presumptions, e.g., the necessary duration of exposure, it did find it necessary to refer to medical criteria as set by the International Labor Organization.[63] It also explicitly left to the Secretary of Health, Education and Welfare (now Health and Human Services) the task of prescribing standards for determining whether a miner was totally disabled or died due to pneumoconiosis.[64] These standards would be used whenever a statutory presumption was not applicable.[65]

The effect of these presumptions is to ease the claimant's burden of establishing a causal link among three elements -- his employment, his disease and his disability. There is no single, simple way to show that the pneumoconiosis necessarily arose out of the claimant's employment,[66] and the Congressional adoption of presumptions was an effective way to overcome that difficulty,[67] particularly in view of the significant correlation between pneumoconiosis and exposure to coal dust.[68]

In 1975, the Supreme Court had the opportunity to pass upon the constitutionality of the presumptions set forth in §411(c)(1)-(4) of the Black Lung Act.[69] The Court categorized the Act as "involving matters of economic regulation"[70] and therefore subject to the standard articulated in Mobile, J. and K.C.R. Co. v. Turnipseed:[71]

> That a legislative presumption of one fact from evidence of another may not constitute a denial of due process of law it is only essential that there shall be some rational connection between the fact proved and the ultimate fact presumed, and that the inference of one fact from proof of another shall not be so unreasonable as to be a purely arbitrary mandate.[72]

The Court further states that:

> The process of making the determination of rationality is, by its nature, highly empirical, and in matters not within specialized judicial competence or completely commonplace, significant weight should be accorded the capacity of Congress to amass the stuff of actual experience and cull from it.[73]

To determine if Congress' presumptions in the Black Lung Act were irrational, the Court considered the legislative history and the scientific testimony it contained. The Court concluded:

> Against this scientific background, it was not beyond Congress' authority to refer to exposure factors in establishing a presumption that throws the burden of going forward on the operators.[74]
>
> In its "rough accommodations" (citation omitted) Congress was surely entitled to select duration of employment, to the exclusion of the degree of dust exposure and other relevant factors, as signaling the point at which the operators must come forward with evidence of the cause of pneumoconiosis or death, as the case may be. We certainly cannot say that the presumptions, by excluding other relevant factors, operate in a "purely arbitrary" manner (citation omitted).[75]

C. The Brodhead Bill

The Study Group rejected the presumptions approach of the Brodhead bill as overly broad and inadequate in supporting the reasonableness of the presumptions proposed.

The Brodhead bill[76] was a slightly modified version of a model act proposed by Sobel in 1977[77] to establish a comprehensive administrative system for the compensation of victims of toxic substance pollution. Within this proposed system, a variety of presumptions would have been used to ease the claimant's burden of showing a causal connection between his injury or disease and the acts of a specific manufacturer. These are presented in §14, which states:

> (a) CREATION OF A REBUTTABLE PRESUMPTION
> In any proceeding for determining the causation of disease or other personal injury arising from toxic substance pollution pursuant to this Act, the rebuttable presumptions of subsection (b) arise whenever there is a showing by any party -- or by the [Administrative Board for Compensation of Victims of Toxic Substance Pollution] that any manufacturer is currently or has been engaging in any toxic substance pollution and that such pollution -
> (1) travelled through an indicated pathway from the point of manufacture to the injured or diseased person; and
> (2) resulted in the etiology of the injury or disease claimed under §13.

> Showings submitted to the ABC shall contain reasonable proof, as may be further defined by the ABC in its regulations, of the aforementioned factors necessary to give rise to the rebuttable presumptions of this section.
>
> (b) REBUTTABLE PRESUMPTIONS
> A showing under subsection (a) shall give rise to the rebuttable presumption that-
> (1) the manufacturer did produce the toxic substance in question at the time and in the manner necessary to have caused the pollution;
> (2) the toxic substance was distributed through the pathway indicated by the showing;
> (3) the toxic substance did result in the etiology attributed to the toxic substance pollution by the showing;
> (4) the manufacturer was solely responsible for the toxic substance pollution in question; and
> (5) the toxic substance by itself, not a mixture or synergistically formed toxic substance, comprised the polluting and injury-causing or disease-causing substance.

The effect of §14 is merely to shift the burden of proof on these five issues to the manufacturer.[78] It is interesting to note that the claimant would have to make some "showing" under §14a that the toxic substance "resulted" in the etiology (i.e., origin) of his disease. It is not clear how much proof would be necessary to make this showing. Having met this burden, the claimant would then be entitled to a rebuttable presumption that "the toxic substance did result in the etiology" attributed to it in the §14a showing.[79] The manufacturer then would have an opportunity to rebut this presumption if a preponderance of the evidence refutes this causal link.

The effect of the Sobel-Brodhead formulation would be to make the first compensation claim for each disease or toxic injury a "test case". Once a causal link has been established, by adjudication of a claim (or by the initiative of the ABC through its investigative arm, if in fact this occurs), the disease would be classified as a "designated disease" pursuant to §15. There are many procedural advantages to contracting a "designated disease".

First, a claimant who complains of a "designated disease" could be certified as a "victim" under §16 of the Act. He would have to show he has been exposed to a toxic substance known to result in a designated disease, and identify the manufacturer(s) responsible. To aid him in this showing, the presumptions listed in §14(b) may be used. They are triggered, however, by a somewhat looser prima facie case, as set out in the "nexus requirements" of §14(d), which would consist merely of showing opportunity for exposure.[80] Thus, the task of showing an "indicated pathway" by which exposure was possible is completely removed from the claimant. The proposal would also eliminate any need for original proof of causality. Finally, while the presumptions of §14(b) would still be rebuttable when used by a victim of a designated disease, it is probable that the manufacturer would find it more difficult to amass evidence refuting the causal link between the toxic substance, the manner and duration of exposure, and the disease experienced by the claimant.

In addition to the overly broad character of the Brodhead bill presumptions, the Study Group rejected the "designated disease" approach because it makes the future course of the law--and of applicable presumptions--depend on the "first case" and on the manner in which it is presented. Reliance on Toxic Substance Documents, based on proper scientific information and adopted in properly contested administrative proceedings, appeared to the Study Group to offer a more substantial basis for formulating rebuttable presumptions that meet the test of reasonableness.

Fifth Recommendation: Tier One -- Compensation Awards; Collateral Sources

The Study Group recommends that the compensation award provide full recovery for all of a claimant's reasonable medical costs, and an amount for loss of earnings due to exposure related disease or disability limited to two-thirds of the full regular earnings up to a monthly limit, to be set by Congress, which, under current economic conditions should not exceed $2,000 for such two-thirds, for as long as the disability continues.[81] It is further recommended that the limit be regularly adjusted to reflect changes in the cost of living. In making the compensation awards, the majority of the Study Group recommended that collateral sources of a public nature shall be considered and the compensation award shall be reduced by amounts to which the claimant may be entitled under public programs such as Medicare, Medicaid, and others,[82] and that the appropriate public source be reimbursed out of the compensation award. A minority of members of the Group recommended that all collateral sources, whether public or private, be considered and treated in this fashion.

The Study Group further recommends the authorization of the payment of reasonable death benefits to dependents in an amount related to the decedent's regular earnings and normal life expectancy and the degree of dependency of claimants.

The Study Group also recommends that the claimant remain entitled to compensation for injury or disease discovered after the conclusion of the proceeding or during and after the period of the compensation award, in view of the long latency of some diseases resulting from hazardous waste exposure, and the probability of the later emergence of more serious consequences than the condition which gave rise to the earlier award.

Discussion

The compensation awards recommended have some clear similarities to worker's compensation awards, in that full medical coverage is to be provided, and in that compensation for disease or disability -- as well as death benefits for surviving dependents -- are related to regular earnings, though not limited to wages and salaries. Another similarity is the absence of damages for pain and suffering or any punitive or exemplary awards. But there are also significant differences, which are explainable by the differences in the relationship of worker and employer, and owner or manager of a waste disposal facility and the victim of injuries from exposure. The worker-employee relationship results in making the expectation of worker's compensation an incident of the employment relationship. Moreover, the costs of the system are clearly incorporated in the costs of production of goods and services. A logical consequence of the work-relatedness of the workers' compensation system is to regard the job-related injury or disease as part of the consequence of employment, compensable regardless of fault, and compensable in an amount measured by lost wages.[83]

The employment relationship is clearly not present where the person who has suffered injury from exposure to hazardous wastes is not an employee. Thus, the analogy to the workers' compensation system is largely one of convenience. While the awards of compensation in both systems provide full medical costs, compensation for disability is not related to wages from a particular employer, but to loss of earnings from all sources, of whatever kind. The recommended limits on awards are somewhat more generous than the usual workers' compensation awards, for two reasons. First, there is widespread concern that workers' compensation has been outpaced by inflation and is not entirely adequate to meet the need for adequate support.[84] Second, the hazardous waste compensation remedy, which is not related to employment, should offer a somewhat more favorable tradeoff between the right to bring a tort action for unlimited damages and the option of a more certain, but a more limited compensation remedy.

There was general agreement in the Study Group that medical expenses should be fully compensated. This differs from the limits that would have been imposed on such expenses under S. 1480,[85] one of the bills before Congress when CERCLA was passed. Medical expenses were viewed as readily ascertainable and as an essential and basic part of any compensation award. Further, the Study Group believes that consideration should be given to the problem of compensating injuries, such as genetic damage, that are not cognizable under present tort law.

The formula for compensation for loss of earnings reflects the Study Group's intention to provide an adequate amount of support to victims. Two-thirds of regular earnings would provide roughly the same amount of support as regular earnings after payment of taxes, since compensation awards are not taxable. The limit of $2,000 per month has been suggested, though not firmly recommended.[86] It reflects an adequate measure of compensation for a claimant with an annual income of $36,000 which in the case of a breadwinner for a family of four, would take in a substantial part of the middle class population, though it would not include high earners or persons not within the wage earner category, who would normally carry health and accident insurance for their own protection.

There were different points of view expressed on the subject of "relating" the upper limit on compensation awards to the cost of living index. The Study Group agreed on the desirability of compensation awards that realistically reflected the economic situation, but some members of the Group objected to indexing, because in their view pegging the maximum of the award to the cost of living index would itself contribute to inflationary pressures, contrary to current national policy. Members of the Group who were in favor of indexing were less persuaded that indexing would have a substantial inflationary effect, and more strongly persuaded of the need to keep compensation awards in line with current economic realities.

The Study Group recommendation relating to collateral sources follows currently accepted approaches to reduce the public cost of the rendition of medical and health services, to avoid double payments for the same service. There is no argument generally on the reduction of awards by collateral receipts where public sources of payment such as Medicare or Medicaid are involved. There is also a question whether the rule relating to collateral sources should apply to the proceeds of insurance that has been funded independently by the claimant. The issue is not only a question of double payment, but also of the impact on future insurability and of putting at a disadvantage the more provident claimant. The decision to reduce compensation by the amount of collateral receipts from public sources reflects a reasonable middle ground, so as not to disadvantage public resources while granting the claimant the advantage of his own providence.[87] A similar rule logically applies to death benefits as well. The majority of the members of the Study Group also supported the middle ground in the belief that reducing the compensation award by the full amount of all collateral receipts, public and private, would persuade many claimants to seek recovery in a plenary action in Tier Two, rather than to rely on the Tier One compensation remedy.

The decision to permit the reopening of the compensation proceeding at any later time reflects the awareness of the Study Group that the diseases resulting from exposure to hazardous wastes not only have a long latency, but may also have a variety of effects, some of which may emerge earlier and some later.[88] Thus, a person who has received a compensation award for a troublesome but temporary skin condition should not be barred from raising additional claims later, if other more serious consequences, such as cancer or central nervous system disorders causally related to the same exposure subsequently emerge.

At such later time, the claimant may reopen the compensation proceeding at Tier One and he may thereafter decide to bring a plenary tort action at Tier Two, subject to the same conditions and rules as apply to access from Tier One to Tier Two under the First Recommendation. If the claimant decides to proceed by way of a plenary court action, no collateral estoppel should arise as to any issue decided in the earlier compensation proceeding. [See Discussion, Second Recommendation].

Sixth Recommendation: Tier One -- Administration of Compensation Remedy; Costs of Administration

The Study Group recommends that the administrative compensation remedy established pursuant to federal law be administered in each state by an appropriate state agency pursuant to federal requirements.[89]

Federal legislation is recommended to encourage the states to participate in the program. Inducement to state participation might include funding for administrative and technical assistance or other federal grants to relieve the states of some or all of the financial burden of participation. The federal legislation that would provide for state participation would also have to provide for the federal agency to assume the task of administering the program in states that will not participate. Federal legislation, such as the NPDES program under the Clean Water Act, or the permit program for hazardous waste sites under subtitle C of RCRA, may provide a general pattern.

The federal agency in charge of the program -- which might be EPA, the Social Security Administration, or other agency with either environmental or social insurance obligations -- would be responsible to see that the state agencies of the states that participate meet the requirements of the federal law, and that the requirements of the federal law are carried out.

The federal supervisory agency should have adequate but limited power to carry out its functions. The aim of the law should not be the creation of a substantial new federal bureaucracy, but rather an agency adequate to see that the law is carried out, leaving its day-to-day implementation to the delegated state agencies. It is recommended that the chief directions and guidelines for the operation of the state agencies be contained in the law itself, and that the federal agency's rulemaking powers be limited, but not so limited as to deprive it of essential operational flexibility. The federal agency should also be granted enforcement powers sufficient to assure that the state compensation systems established pursuant to federal law provide the full measure of remedies established -- i.e., an adequate system for the bringing and determination of claims in accordance with federal law, and for the review of such determinations, an effective system for the payment of compensation awards, and an effective system for the assertion of subrogation claims by the compensation agency against the owner or manager of the disposal site or other party responsible for causing the condition that caused the damage or injury, where subrogation is authorized.

On the state level, the agency should have adequate powers to accept and carry out the administration of the compensation system. The federal legislation should leave it to the state's discretion whether to create a new compensation agency, or whether to authorize a suitable existing agency to assume the function.[90] Existing workers' compensation boards, other agencies versed in insurance problems, or agencies involved in environmental controls or public health management may be appropriate for the task. The only requirement, however, that should be set forth in the legislation is the agency's capacity to comply with the federal law in an effective manner, in the following particulars:

(a) An administrative structure competent to establish and maintain a system of claims management from the filing of covered claims to the determination and distribution of awards.

(b) Sufficient qualified medical and scientific personnel to make determinations relating to the extent and duration of disease and injury, and relating to the extent of necessary and reasonable medical costs to be included in awards.

(c) Sufficient qualified personnel to make determinations relating to the recognition of covered claims, and to make the scientific and legal determination necessary to establish the causal link between the exposure and the disease.

(d) Sufficient claims management and legal experience to deal effectively with subrogation claims by the state compensation agency against owners/managers or the transporters responsible for the claimant's exposure to hazardous wastes.

(e) Adequate powers to carry out the usual and necessary housekeeping functions relating to notices, hearings, and proceedings, production of witnesses and documents, maintenance of dockets, and including such functions as the preparation, dissemination and publication of compensation awards.[91]

The Study Group recommends that the federal government contribute eighty percent of the cost of administration of the state compensation agencies, including legal expenses, and that the states contribute the remaining twenty percent.[92]

Discussion

The Study Group viewed the compensation remedy as a federally created remedy subject to federal law, to be administered in the main by state agencies. The major function of the federal agency would be to see that compensation agencies established by the state to administer the program were adequately authorized, equipped, and staffed to do so, and to monitor their performance. The federal agency should not have broad rulemaking and standard setting powers beyond the power necessary to exercise adequate oversight. The regular day-to-day operation of the compensation system would be in the hands of the state agency without direct federal participation or intervention in the management of claims. The federal agency should, however, be in a position to use appropriate administrative measures in the event of a general failure of compliance by a state agency. Failure of the state agency to comply with the law in particular compensation claims proceedings should be managed through the judicial review process.

The Study Group takes the position that the compensation remedy ought to be a uniform program, and the claimants' compensation award ought not to depend on the state or location where the exposure occurred. The essential uniformity of the remedy, nationwide, should be maintained by the federal agency, and where appropriate, through judicial review. The effort to encourage national uniformity recognizes the national scope of the chemical industry, as well as the national source of funding from which the compensation awards will be paid.[93]

The Study Group believes that both the federal and the state agency needs some flexibility and some limited rulemaking authority to provide for a workable system. Some of the Study Group members share the concern that the creation of a large bureaucracy with broad rulemaking powers is undesirable -- and would, moreover, run counter to some current trends in administrative law. The resulting proposal thus reflects a compromise between an approach that would have given the federal agency broader, more general administrative powers, and an approach that would have denied the federal agency rulemaking power altogether.

Seventh Recommendation: Tier One -- Compensation Awards: Payment from Hazardous Waste Compensation Fund; Recovery from Responsible Parties for Future Exposures by Subrogation

The Study Group recommends the establishment of a federal fund to be applied to the payment of compensation awards pursuant to the administrative compensation Tier One remedy. The fund analogous to the Superfund created by CERCLA, should be established by contributions from, or taxes on, the prdduction of hazardous or toxic chemicals, and crude oil, and by a tax on the deposit of hazardous wastes. Further study is recommended to establish whether the class of industries taxed under CERCLA should be expended. In general, the establishment of the hazardous waste compensation fund should follow the pattern of the present law.

The Study Group recommends that the payment of compensation awards be independent of the availability of a responsible party against which a claim for compensation or a subrogation claim for compensation can be made.

The majority of the Study Group[94] recommends that the Compensation fund should pay all proven claims for compensation for injuries and illness arising out of exposure to hazardous substances or wastes disposed of, transported, or spilled prior to the adoption of this proposal, or those resulting from exposure to such wastes at an "orphan site" for which no responsible owner can be found. The compensation fund should not be authorized to assert any claims for contribution or subrogation from allegedly responsible parties in such cases.

In cases of claims of compensation for injuries and illnesses arising out of exposure to hazardous substances or wastes disposed of, transported or spilled after the adoption of this proposal, the allegedly responsible owner/operator of the site, the transporter or the generator of hazardous substances or wastes should receive notice of the claim for compensation, but the compensation agency should proceed to determine the claim without his participation in the proceeding. If the compensation agency makes an award and pays it out of the compensation fund, it should then seek to replenish the fund by subsequently asserting a subrogation claim against the allegedly responsible party.

As state compensation agencies make awards payable out of the compensation fund, monies should be transferred from the federal fund to the state to meet the need.

The Study Group recommends that the "discovery rule" apply to all claims and that claims not be time-barred by reason of the passage of time from exposure or injury to the discovery of the illness or injury on which the claim is based, and regardless of whether the responsible party knew, or should have known of the hazardous condition, or of the hazardous nature of the wastes. The majority of the Study Group recommends that any agency's claim for subrogation for post-adoption claims of exposure be coextensive in time with the claim for compensation -- i.e., that both claims be regarded as accruing at the time of the discovery of the disease or injury and its cause. The claim for compensation should not require proof that the owner/manager of a site, transporter or generator knew or should have known of the hazard. The majority of the Study Group further recommends that the claim for subrogation for post-adoption exposure also should not require such proof, and should be based on liability without fault. A minority of the Group believes that subrogation be based on proof that the operator or owner did not meet the industry standard of care.

All amounts recovered by subrogation claims should be paid back into the hazardous waste compensation fund.

If the hazardous waste compensation fund becomes depleted, the Congress should consider whether to increase the tax on the industries that contributed to the establishment of the fund, or whether the fund should be enhanced by contributions from general revenues.

Discussion

The recommendation for the establishment of a Hazardous Waste Compensation Fund follows closely the provisions of CERCLA which provide for the establishment of the Hazardous Substance Response Fund (§221) and the Post Closure Liability Fund (§232). The Hazardous Waste Compensation Fund would be established by a tax on industry following the pattern set by §§221 and 232 of CERCLA, providing for a tax on certain chemicals and on hazardous wastes, respectively. The possible broadening of the class of industries taxed under CERCLA was also suggested. By its recommendation the Study Group recognizes that the compensation of adverse health effects is as deserving of expenditures for remedial measures as are clean-up costs and environmental remedial measures for which Congress has previously made provision.

Some members of the Study Group expressed concern over the additional burdens this tax might place on industry, particularly with respect to international competitive positions and suggest that the creation of a fund out of general revenues might be preferable, in the interest of preserving the competitive position of the American chemical industry, in light of its essential contribution to the economy of the Nation. As a general principle, the economic cost of injury should be carried by the industry or enterprise that creates them, because efforts to reduce the cost will result in greater care and more safety and protection of the public. This general principle may have to yield in the case of an industry whose international competitive position may be of great significance to the balance of trade and to the welfare of the country. Moreover, it is clear that ultimately the general public bears the cost regardless of the choice, either in paying a higher price for the products of the chemical industry or in the form of higher taxes.

In the resolution of this issue, the majority of the Study Group again followed the Congressional lead in CERCLA in placing the burden on industry in the first instance, possibly with an expansion of the class to be taxed, but leaving to later Congressional determination the question of reliance on general appropriations, if the tax on industry is insufficient and the fund is depleted.

The recommendation seeks to impose liability prospectively for injuries that occur from exposure to hazardous wastes and to spills of hazardous substances disposed of or spilled after the adoption of the Study Group recommendations. Injuries for exposures to hazardous wastes which were disposed of prior to adoption of the recommendation would be compensated in the same manner out of the compensation fund, but no effort would be made to secure reimbursement of the award, directly or by subrogation, from responsible parties. Thus, from the point of view of the claimant, there is no distinction between earlier and later exposures, because they are subject to compensation, whether pre- or post-adoption. The difference between the treatment of pre- and post-adoption exposure lies in the assertion of responsibility, whether directly or by subrogation, against the allegedly responsible generator, transporter, or disposer of hazardous wastes. The Study Group arrived at its recommendation relating to exposure to wastes disposed of pre- and post-adoption after lengthy and detailed consideration of the issues of "retroactivity" which gave difficulties to some members of the Study Group. [For discussion of legal issues involved see Appendix L]. The recommendation resolves such issues because it imposes liability for compensation awards, directly or by subrogation, only on generators, transporters, or disposers of wastes if their activities which gave rise to exposure occurred after the adoption of the proposal. In addition to avoiding issues of retroactivity, the prospective nature of the proposed liability should increase the likelihood that generators, transporters, or disposers will obtain insurance coverage for the risk.

The Study Group discussed at length whether the compensation hearing should be a contested proceeding or whether the allegedly responsible party should merely have notice but not the right to participate. In the interest of speed of disposition of the claim, the majority of the Group decided against requiring the state to provide for a right of the party allegedly responsible to participate,leaving it to the compensation agency to manage the proof of the claim, rather than to an adversary proceeding.

Other issues discussed included the inducement for the agency to pursue subrogation, since it has no direct interest other than the more remote interest of replenishing the compensation fund. The concern was expressed that in order to collect in a subrogation proceeding, the state agency might bring pressure to bear on a claimant to pursue the Tier Two remedy, in which case the agency would either get reimbursed out of the award of damages, or else could try to join in the action to bring the subrogation claim. The Study Group was generally agreed that compensation agencies should not use Tier Two actions by the claimant as a method of obtaining payment of the subrogation claim. The Group was divided, however, on ways of preventing such a course, and on whether efforts to prevent it would not be unduly troublesome in creating procedural complexities. The Study Group was in general agreement, however, that no collateral estoppel of any kind should arise out of the compensation proceeding.

Eighth Recommendation: Tier One -- Judicial Review of Compensation Awards

The Study Group recommends that the grant or denial of a compensation award or the amount and adequacy of the award be subject to judicial review in the appropriate state courts, in the manner in which the determination of state workers' compensation awards and other similar administrative determinations are normally reviewable.

If the claimant or the respondent believes at the conclusion of the state review process that a misinterpretation of the guidelines set by the federal agency in charge of the program resulted in the grant or denial, or in the inadequacy of the award, then the claimant or the respondent should be entitled to a review of the issue by the federal agency.

If upon an appeal the federal agency affirms the determination of the state agency, its affirmance on the issue of compliance with the guidelines shall be final. If the federal agency reaches a result at variance with that reached by the state, the determination of the federal agency should then be subject to judicial review in the appropriate federal Court of Appeals for the Circuit in which the state is located. Judicial review by the Circuit Court of Appeals should be governed by §706 of the Administrative Procedure Act.

Discussion

The provision of judicial review for determinations of the compensation agency is necessary not only to meet the requirements of justice and constitutional law, but also to advance the purposes of uniformity for a national compensation system. Since compensation agencies will operate on the state level, it is appropriate that judicial review of the denial or adequacy of compensation awards be held at the state court level in the first instance, in the manner of similar judicial review of state administrative action. In the interest of national uniformity in dealing with similar issues in different parts of the country, questions relating to the interpretation of the federal agency guidelines should be reviewable in the first instance by the agency itself, and then, where the federal and state determinations differ, by the appropriate federal Court of Appeals. Such a narrow review of compliance with federal guidelines would advance the national goals of the program without undue interference with state management of claims. The Study Group was divided on the issue of granting the federal agency the right to seek review on its own motion of a failure to comply with its guidelines.

Judicial review under §706 of the Administrative Procedure Act is narrow in scope. Its essential factors are the review of the legal sufficiency of the determination, and the application of the "arbitrary, capricious...abuse of discretion" standard to the administrative determination as a whole.[95] As currently interpreted, this means that the compensation award would be upheld if it took into account all relevant facts and factors and did not reflect any clear errors of judgment.[96]

Ninth Recommendation: Tier Two -- Plenary State Court Actions; Removal of Obstacles and Barriers to Effective Court Actions for Personal Injuries Resulting from Exposure to Hazardous Wastes

The Study Group recommends that the several states enhance and develop common law and statutory remedies, and that they remove unreasonable procedural and other barriers to recovery in court action for personal injuries resulting from exposure to hazardous waste, including rules relating to the time of accrual of actions, joinder of parties, apportionment and proof of causation.

(a) Statutes of Limitations

A small number of states still follow the so-called traditional rule that the cause of action accrues from the time of exposure. Another small number of states has not as yet clearly adopted either the traditional or the discovery rule. Since many of the hazardous wastes are carcinogens, mutagens, teratogens or substances with delayed impact on different organs or the central nervous system, the latency period for the appearance of injury or disease is likely to be extended for thirty years or more. In states that have not clearly adopted the discovery rule (i.e., that the cause of action accrues from the time the plaintiff discovered or reasonably should have discovered the injury or disease) the cause of action will usually be time barred when the plaintiff discovers his hurt. The Study Group recommends that all states that have not already done so, clearly adopt the rule that an action accrues when the plaintiff discovers or should have discovered the injury or disease and its cause. The Recommendation is intended also to cover the repeal of the statutes of repose which, in a number of states have the same effect as some statutes of limitation in barring plaintiff's claim before he knows that he has one.

(b) Parties Plaintiff

The complex nature of hazardous waste litigation makes it important that the combination of a number of plaintiffs in one lawsuit be encouraged, both for the sake of the judicial system and for the sake of the litigants. Exposure to hazardous wastes may not be limited to a single person but may often involve a substantial number of persons. The evidentiary problems in hazardous waste cases are substantial and involve sophisticated expert testimony of a medical and scientific nature, relating both to causation and nature of injury. Such testimony is not only very time-consuming, but also very expensive. The combination of a number of plaintiffs in a single case saves time and avoids inevitable trial delays resulting from large numbers of cases that would otherwise enter the judicial system one at a time. From the plaintiff's point of view, the need to combine with others who are similarly situated is essential in all but the very largest individual claims, because very few lawsuits would justify the massive expenditures for expert witnesses and scientific and medical testimony that are needed. Thus, a denial of plaintiff combinations in the bringing of such lawsuits in effect denies a plaintiff the opportunity to bring the action at all, unless his claim is exceptionally large.

To facilitate easier plaintiff combinations, the Study Group recommends that states adopt liberal joinder rules, so as to allow complex issues of causation and liability to be tried together, leaving such issues as individual damages to separate trials, if necessary.

(c) Parties Defendant; Apportionment

The selection of proper parties defendant in a hazardous waste case is difficult because of the long latency period of many hazardous waste injuries and diseases, and because of the number and variety of hazardous substances or wastes that may be implicated in any case of injury resulting from exposure. When carcinogenic, mutagenic and teratogenic effect may not manifest themselves until 20 or 30 years later, the ownership of the disposal site, or of the transportation facility involved in the initial exposure may have changed several times; there may be questions of the time of the initial exposure; there may be questions of the contributory impact of intervening exposures; and there may be a question as to which hazardous waste and from which source is responsible for the particular injury. It is impossible here, as in other instances of environmental pollution, to attribute and allocate responsibilities and liabilities with specificity. Substantive and procedural rules that require such specific allocation will defeat the plaintiff's claim.

The Study Group therefore recommends that the states review and, where appropriate, revise their substantive and procedural rules so as to hold contributors to injury or damage jointly and severally liable, under the theory of concert of action or other approaches that place the burden of allocating separate contributions to the injury among a number of defendants, once there has been proof that a defendant has contributed to the risk or to the injury. However, there should be a *de minimis* exception--the so-called "one drum defense" to provide the necessary element of fairness to joint and several liability. The Study Group also recommends that states examine alternative approaches to apportionment, such as the "channelling" approach which channels responsibility to a designated party; this approach is now in effect under the Price-Anderson Act and in third party nuclear liability in western Europe.

The Study Group also recommends that the substantive law relating to a landowner's obligation be clarified so that a former owner may not relieve himself of the liability for injuries caused by hazardous waste nuisances or dangerous conditions on his land by selling the property, and so that a new owner who, at the time of acquisition, knew or had reason to know of the dangerous condition may not relieve himself of liability for the maintenance of the nuisance or hazard by asserting the responsibility of the former owner for its creation.

Liability for damages for personal injury resulting from exposure to hazardous substances or wastes should not extend to the owner who shows that such substances or wastes were deposited on his land without his knowledge or consent. The Study Group recognizes, of course, that the owner's obligation to abate a nuisance or to remove a condition which threatens the public health is separate from the liability for damages for personal injury.

To ease procedural problems affecting the apportionment of responsibility for an injury, the Study Group recommends that the States adopt liberal joinder rules for defendants as well as for plaintiffs.

(d) Proof of Causation and Related Evidentiary Problems

Regardless of the cause of action -- whether trespass, nuisance, negligence, riparian rights, strict liability or any other -- the establishment of the causal connection between the exposure to hazardous wastes and the injury or disease suffered remains a difficult evidentiary problem because of long latency periods and the variety of exposures from one or more disposal sites or other potential causes of injury or disease. The relationship of particular pollutants to particular diseases is not always fully documented, and long latency periods (with other intervening exposures a distinct likelihood) for cancer, neurological and other injuries, cause additional problems. Mutagenic and teratogenic consequences will not show until the next generation and may give rise to special problems.

A number of evidentiary presumptions have been recommended by the Study Group to operate in the "Tier One" hazardous waste compensation remedy proposal, and the Study Group expresses the view that the presumptions in plenary tort actions in Tier Two be left to the development of the law in the several states.

(e) Strict Liability

The Study Group recommends that the several states develop and enhance causes of action that apply strict liability to the generation, transportation and disposal of hazardous wastes. Formulations of strict liability that balance the hazard of the activity against its utility and its appropriateness to the locale import considerations of negligence that entail significant barriers to the recovery of damages for injuries from exposure to hazardous wastes. To remove these barriers, the application of a theory of strict liability is needed that focuses on the nature of the hazardous waste activity itself, and on the magnitude of the risk.

Discussion

(a) Statutes of Limitation

The Study Group agreed not only that the discovery rule should be applicable, but also in the view that a formulation of the discovery rule be applied that provides that an action accrues when the plaintiff knows, or should know, of the injury or illness, and also of its cause.[97]

(b) Parties Plaintiff

The Study Group agreed that the procedural devices to allow plaintiffs to join forces in proving highly technical and complex evidentiary points are desirable, both to save unnecessary expenses, but also to avoid wasteful duplication of effort in the repetitive presentation of items of technical and scientific evidence. In the view of the majority of the Study group, this could best be accomplished by liberal joinder rules. The majority of the Group expressed the view that the use of class actions for mass torts is not appropriate, and knowledge of the action might be bound by its outcome, and in part because of highly individual factors affecting personal injuries. A smaller number of members of the Study Group were of the opinion that class action approaches could be usefully adapted to mass tort actions.[98]

(c) Parties Defendant, Apportionment of Liability

The Study Group agreed that joint and several liability was a useful and necessary rule to allow recovery by a plaintiff who had a valid claim, but who could not pinpoint the precise contribution to his injury by each of several defendants. Joint and several liability and the adoption of an expanded approach to concert of action would allow the allocation of liabilities among a group of defendants by the defendants themselves. To avoid the situation of casting the entire liability on the defendant with a deep pocket but minimal responsibility, the adoption of the so-called "one-drum defense" is recommended. The Study Group reviewed the recent theories of market share liability and enterprise liability, but concluded that "market share" was probably inappropriate in the hazardous substance or waste situation, because it would be too difficult to divide and ascertain the shares of substances from different sources, unlike the situation of the market for a particular drug (DES) where the theory has been applied in the past. The "enterprise" approach, which would cast liability on the industry as a whole, is as yet too novel and untried to be recommended.[99]

The Study Group was made aware of serious problems of the insurance industry when strict liability is imposed on numerous firms at the same time for the same injury, especially when it may be difficult to link the cause of injury to any particular policyholder, time period or industrial activity. The Group considered the concept of "channelling", namely the possibility of reforming apportionment rules to provide that a single, identifiable hazardous waste handler would be held responsible for each type of waste accident.[100]

The Convention on Third Party Liability in the Field of Nuclear Energy (Paris Convention), signed July 29, 1960, has operated the channelling concept at an international level successfully for almost a quarter of a century. This system, involving (1) strict but exclusive liability, (2) limitation of liability, (3) compulsory financial security and (4) a government-financed excess liability fund is worthy of serious consideration.[101] This system is analogous but not identical to the Price-Anderson scheme. Commentators have been suggesting channelling approaches in connection with other high-risk activities. If such an apportionment rule is suitable for use in the regulatory and financial responsibility system developing under RCRA, it may result in a higher percentage or premiums (or "loss dollars") going to injured persons.[102]

The Recommendation largely accepts existing common law approaches to th problem of liabilities of successive landowners, and suggests that liberal joinder of defendants may prove as useful as liberal joinder of plaintiffs.

(d) Rejection of Tier One Presumptions; Use of Toxic Substance Documents

The Study Group had extended discussions on the question of the applicability of the "Tier One" presumptions on "Tier Two". Since the compensation remedy is to be a speedy remedy to provide limited compensation to victims, the generous use of such presumptions to advance the victims' claims and to reduce the transaction costs of managing numerous claims is warranted, particularly because it is anticipated that the bulk of claimants will rely on the Tier One compensation system. There is an advantage in maintaining ease of proof in the compensation system, because it is likely that with increasing claim experience, its costs will be more readily calculable and predictable than the Tier Two tort remedy with its potential, as other tort claim experience has shown, for very large verdicts.

Some members of the Study Group expressed the belief that to extend the rebuttable presumptions to the plenary tort remedy would encourage greater reliance on that remedy, at substantial additional cost. Some members also believed that it was appropriate in what are likely to be very substantial tort actions for the plaintiff to meet the full burden of proof including the necessary scientific and medical evidence necessary to establish causation. On the other hand, the point of view was also expressed that the Tier One presumptions would not be permissible in most states in the trial of an action for personal injuries, so that a Study Group recommendation on that issue would have relatively little weight. However, some members feared that sooner or later, the common law would follow the statute so that the presumptions applicable to the compensation remedy would ultimately be applied in tort actions as well. It was also said that if the presumptions were appropriate -- because of their validity -- in the compensation proceedings, it would not be proper to attempt to bar their use where similarly appropriate in personal injury action in the courts.[103]

The Study Group concluded that the Tier One rebuttable presumptions were not appropriate for use on Tier Two. However, using common law evidentiary approaches, courts might be free to consider the "Toxic Substance Documents" in the manner in which treatises and other authoritative works are used. Some members of the Study Group were concerned that Toxic Substance Documents might be used to establish a required minimum standard of proof. The Study Group was in general agreement in its discussion that such an implication was not intended.

(e) Strict Liability

The Study Group agreed that hazardous waste activities may be characterized as activities which entail serious risks, even if carried out with reasonable care. A person who conducts such an activity should be held strictly liable for the consequences.

It has been noted that formulations of strict liability that emphasize the locale of such activities, or that balance its hazard and its utility end up by implicitly applying a negligence standard which creates a significant barrier to recovery. Although there was considerable division on the issue, the majority of the Study Group recommended that the courts apply a theory of strict liability that would focus on the hazardous nature of the activity itself, particularly in view of the potentially farreaching and long-lasting impact of hazardous wastes on health and the environment.[104]

Tenth Recommendation: Damage to Private Property and Environmental Interests

The Study Group recommends that environmental damage to private property, including economic injury, resulting from exposure to hazardous wastes and hazardous waste activities be the subject of plenary action under state law in the state courts. The Study Group further recommends that in dealing with such damage actions, the states adopt the procedural and substantive changes and improvements of existing common law remedies contained in the Ninth Recommendation, as may be appropriate, adding to its Recommendation that in the case of actions for damage to private property, class actions may well be suitable.

The Study Group recommends that the states review the availability of "Superfund" to provide for the costs of remedial actions to deal with the environmental impacts of hazardous wastes which affect many private properties and their owners in areas of the state that have suffered contamination of subsurface waters or of the soil. The Study Group also recommends that the states consider the commencement of parens patriae claims against Superfund on behalf of their affected citizens whose property has been affected by such contamination, under CERCLA §111(c) which provides for use of Superfund for remedial action in the case of such public environmental assets as the waters and subsurface waters of the state.

The Study Group also recommends that the state consider the adoption of laws and public programs to provide remedial measures in situations that are not being addressed in the implementation of the Superfund, and where the provision of public programs may be more effective and socially useful than the recovery of damages by individual owners. This consideration would be aided significantly if Congress were to clarify its intent with respect to preemption of state tax sources under CERCLA §114. The practical need for such independent State programs would be lessened if the federal government was providing the States with available funds in the Superfund to undertake cleanups, as we believe Congress intended when it passed that Act.

Discussion

Environmental Damage to Private Property; In General

The Tenth Recommendation contains two interrelated parts. The first part addresses the role of private damage actions for damage to private property and environmental interests. The second part deals with remedial measures that are, or may be, available under government programs where a number of owners of private property in an area of the state have been affected in similar ways, whose damages can be relieved more effectively by a government program than by individual damage actions.

Actions for Damages to Private Property

The Study Group recognizes the farreaching impact of hazardous wastes on environmental aspects of private property and on economic interest, but recommends fewer changes than with respect to personal injury because the problems of personal injury and disease are more immediate and in need of more rapid resolution than issues of property damage or loss. Moreover, although many legal issues involved in claims for property damage are as complex as the issues relating to personal injury, property-related actions do not generally share the substantial medical and scientific issues involved in establishing the causation and etiology of disease.[105]

Actions for property damage involve multiple defendants as do personal injury actions, and joint and several liability, under the same rules of apportionment recommended in Recommendation Nine, ought to prevail. The Recommendation relating to modification of procedural and substantive law applies here, too, with the additional recommendation that in the area of actions for property damage, class actions appear appropriate.[106]

Actions Under Superfund and State Programs for Remedial Actions

The impact of certain kinds of hazardous wastes is likely to affect a number of property owners' interest in a fashion which is not dealt with most effectively by individual damages. For instance, compensating each homeowner for the contamination of his well when scores of other wells in the area are similarly contaminated is likely to be less efficient than the construction of a water supply system to serve all similarly affected homeowners in the area.[107] In situations of this kind, which are likely to recur, state claims against the "Superfund" may be available under §111(b) and (c) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA). The underground water of the state is a "natural resource within the boundary of [the] state belonging to, managed by, controlled by, or appertaining to the State[,]" for which the state may claim the costs of remedial action, and seek to collect:

> (2) the costs of...State efforts in the restoration, rehabilitation, or replacement or acquiring the equivalent of any natural resources injured, destroyed or lost as a result of a release of a hazardous substance. CERCLA §111(c)(2).

The state could -- and should -- under appropriate state law provide a program for the replacement of natural resources -- such as the construction of a water supply system to replace contaminated wells -- seeking reimbursement under the appropriate provisions of Superfund. In the alternative, a state could seek the replacement of destroyed natural resources, such as private water supplies, by filing a claim under CERCLA §107 on behalf of the citizens of the state, in a representative capacity as parens patriae.[108]

It has come to the Study Group's attention that there have been some administrative delays in the management of claims for Superfund support in cleaning up hazardous waste problem sites, and that the state authorities have been informed that only a small number, not more than 10-15 percent of the sites, are likely to be cleaned up by Superfund contributions in the foreseeable future. The need for rapid response to state cleanup needs and for more substantial funding has been indicated and states are beginning to consider Superfunds of their own. The slow progress of federal Superfund cleanup, sometimes tied to the difficulty of state provision for the payment of the state's share, coupled with the doubts relating to the tax preemption under CERCLA §114 leaves the states in a difficult position. This concern has prompted our recommendation that the states enact legislation to provide for public programs of state remedial measures, and that Congress clarify its intent relating to the preemptive reach of §114.[109]

Part IV Notes

1. For analytical comments on no-fault compensation plans generally, see CALABRESI, THE COSTS OF ACCIDENTS (1970). Calabresi & Hirschoff, Toward a Test for Strict Liability in Torts, 81 YALE L.J. 1055 (1972); Ehrenzweig, Compulsory "Hospital-Accident Insurance: A Needed First Step Toward the Displacement of Liability for Medical Malpractice, 31 U. CHI. L. REV. 279 (1964); Havighurst & Tancredi, Medical Adversity Insurance -- A No-Fault Approach to Medical Malpractice and Quality Assurance, 51 HEALTH & SOC. (Milbank Memorial Fund Q.) 125 (1973); HOLDER, MEDICAL MALPRACTICE 431-434; O'CONNELL, ENDING INSULT TO INJURY (1975); O'Connell, Expanding No-Fault Beyond Auto Insurance; Some Proposals, 59 VA. L. REV. 749 (1973). For an analysis of the involvement of tort law in the direction of distributive justice and a system of social insurance, See England, The System Builders: A Critical Appraisal of Modern Tort Theory, 9 J. LEGAL STUDIES 27 (1980). See also, Note, Allocating the Costs of Hazardous Waste Disposal, 94 HARV. L. REV. 584 (1981). For discussion of New Zealand's multi-coverage compensation statute, see Vautier, No-Fault Insurance and the Accident Compensation Legislation in New Zealand, INT'L BAR J., May 1975, at 45; Palmer, Accident Compensation in New Zealand: The First Two Years, 25 AM. J. COMP. LAW (1977). Note that the no-fault compensation remedies proposed or discussed include plans for non-employment related injuries, as in medical malpractice or product liability. For analytical views opposed to no-fault compensation, see, e.g., Corboy, The Expanding Universe of Jeffrey O'Connell: Backing Into A Brave New World, 1976 U. ILL. L. FORUM 74 (1976); N.Y. A.T.L.A., QUALITY MEDICAL CARE -- THE CITIZEN'S RIGHT 294-307 (1975); Lanzone, No-Fault Medical Malpractice: Is this Really the Solution? 11 TRIAL LAWYERS Q. No. 3 pp. 46-48 (1975).

2. See Part II, Dimensions and Complexity of the Hazardous Waste Problem, and Appendix J.

3. See, e.g., "200,000 Delayed Deaths from Asbestos Forecast," N.Y. Times, 12/25/81. Note that asbestos fibers have been found in 96% of all urban dwellings in the U.S. C.E.Q. ENVIRONMENTAL QUALITY 1978, at 180.

4. See, e.g., a discussion of the cooperation among the thousands of plaintiffs in DES cases around the country, in Rheingold, Mass Disaster Litigation and the Use of Plaintiffs' Groups, 3:3 LITIGATION 18 (1977). See also Comment, DES and a Proposed Theory of Enterprise Liability, 46 FORDHAM L. REV. 963, 978 (1978).

5. See, e.g., Judge Pratt's description of tens of thousands of servicement, including those from other countries, who have been injured by Agent Orange, in In re "Agent Orange" Product Liability Litigation, M.D.L. No. 381, 506 F. Supp. 762 (E.D.N.Y. 1980); reversed for lack of federal jurisdiction, 635 F.2d 987 (2d Cir. 1980). See also C.E.Q., ENVIRONMENTAL QUALITY 1979 at 213-14 for a short history of the controversy.

6. See, e.g., 2 HARPER & JAMES, LAWS OF TORTS §11.5 at 742.3 and "Fault as a Basis of Liability," §12.1 at 744-47, and §12.4 at 752-57 (1956); PROSSER, HANDBOOK OF THE LAW OF TORTS, ch. 1 §1 (4th ed. 1971).

7. See, e.g., Harley & Rheingold, New Survey of Medicaid Malpractice Litigation, N.Y.L.J. (April 28, 1976) to the effect the experienced malpractice specialists will not accept a case unless it is "worth" (1976) at least $40,000. in potential recovery.

8. For proposals in the medical malpractice and product liability field relative to binding election between a no-fault and a traditional tort remedy, see writings by Jeffrey O'Connell, No Fault Liability by Contract for Doctors, Manufacturers, Retailers and Others, 1975 Ins. L.J. 531; Elective No-Fault Liability by Contract With or Without an Enabling Statute, 1975 U. Ill. L.F. 59; An Elective No-Fault Liability Statute, 1975 Ins. L.J. 261: Transferring Injured Victims' Torts Rights to No Fault Insurers: New "Sole Remedy" Approaches to Cure Liability Insurance Ills, 1977 U. Ill. L.F. 749 (1977).

9. This approach is generally followed in worker's compensation when the injured worker sues the manufacturer of the faulty machine responsible for his injury.

10. Such entry barriers are not unusual in automobile no-fault statutes. See Henderson, No-Fault Insurance for Automobile Accidents: Status and Effect in the United States, 56 ORE. L. REV. 287 (1977); Note No-Fault Automobile Insurance: An Evaluation Survey, 30 RUTGERS L. REV. 909 (1977). Comments compare the "pure" no fault approach with the add-on tort law with entry barrier approach.

11. CAL CODE CIV. PRO. §§1141-20 21 (Deering 1981). See also HENSLER et al., JUDICIAL ARBITRATION IN CALIFORNIA (Rand Institute for Civil Justice, 1981).

12. Delegations of this kind have become quite common, as for instance, in Titles 18 and 19 (Medicare and Medicaid) in the Social Security Law, though the nature of the delegation is different in each of these programs, and in the Clean Air Act (Enforcement of State Implementation Plans, C.A.A. §110, 42 U.S.C. §7410) and in the Clean Water Act (Enforcement of National Pollutant Discharge Elimination System, which allows states to enforce their own permit system subject to federal law). C.W.A. §402, 33 U.S.C. §1342.

13. One of the bills that was eventually merged into CERCLA provided for medical expenses and wage loss, namely S. 1480, 96th Cong., 2d Sess., introduced on July 11, 1979 by Senators Muskie, Stafford, Chafee, Randolph and Moynihan. The bill provided for 100 percent of lost wages in the first year following illness or injury, and 80 percent loss during the second year. Medical expenses are to be covered, under a detailed scheme for the proof of medical causation, for medical expenses incurred within six years of discovery of ilness or injury. *See* S. Rep. No. 96-848, 96th Cong., 2d Sess. (1980) at 23.

14. *See* CERCLA §§103, 104, 107, 42 U.S.C. §§9603, 9604, 9607. These sections make it clear that CERCLA is not concerned with clean-up of environmental pollution generally but with the clean-up of hazardous spills and wastes. The problem of defining the coverage of compensation systems so as to define the covered risk first arose in workers' compensation, which in 42 states limited coverage to injuries "arising out of and in the course of employment," which has given rise to substantial litigation. LARSEN, WORKMEN'S COMPENSATION §§6, 15.30, 29.10. *See also* Note, *Workmen's Compensation -- A New "In the Course of Employment" Concept*, 56 NEB. L. REV. 216 (1977).

15. The idea of the exclusivity of the worker's compensation remedy for occupational injury or disease is well established, with all states designating it as the exclusive remedy by statute. LARSEN, *supra* note 1 , at §65.10. This rule, however, has not affected the employee's right to sue third parties in negligence if they were responsible for the injury. In a waste disposal operation, such third party responsibility would be difficult to prove, and the principle of proper cost allocation would argue for applying the usual workers' compensation remedy. For recent sources on workers' compensation and occupational disease, frequently involving hazardous substances and wastes, *see* FELLNER and SAVELSON, OCCUPATIONAL SAFETY AND HEALTH -- LAW AND PRACTICE (Practising Law Institute 1976); PAGE and O'BRIEN, BITTER WAGES (1973); LARSEN, THE LAW OF WORKMEN'S COMPENSATION §§41.00-41.90 (1952, 1978); PRACTISING LAW INSTITUTE, HANDBOOK ON OCCUPATIONAL SAFETY AND HEALTH (1980); U.S. DEP'T. OF LABOR, AN INTERIM REPORT TO CONGRESS ON OCCUPATIONAL DISEASES (1980); Edes, *Compensation for Occupational Diseases*, 31 LABOR L.J. 595-601 (1980); Kutchin, *The Most Exclusive Remedy Is No Remedy at All: Worker's Compensation Coverage for Occupational Diseases*, 32 LABOR L.J. 212-228 (1981); LaDov, Mulryan and McCarthy, *Cumulative Injury and Disease Claims: An Attempt to Define Employer's Laibility for Worker's Compensation*,

6 AM. J.L. & MED. 1-28 (1980); Note, Compensating Victims of Occupational Disease, 93 HARV. L. REV. 916-937 (1980).

16. See supra note 14.

17. CERCLA §104(i), 46 U.S.C. §4604(i). For summary tables of toxic substances and their human health effects, see, e.g., "Common Hazardous Wastes," C.E.Q., ENVIRONMENTAL QUALITY 1980, at 217; "Occupational Cancers," C.E.Q. ENVIRONMENTAL QUALITY 1979 at 192-93; "Chemicals or industrial Processes Associated with Cancer Induction in Humans," C.E.Q., ENVIRONMENTAL QUALITY 1979 at 199-200. See Appendix J.

18. See infra Fourth Recommendation.

19. See infra Ninth Recommendation.

20. Some members of the Study Group favor the use of some form of hybrid rulemaking. For excellent general discussions, see Stewart, Vermont Yankee and the Evolution of Administrative Procedure, 91 HARV. L. REV. 1805 (1978); Williams, "Hybrid Rulemaking" Under the Administrative Procedure Act: A Legal and Empirical Analysis, 42 U. CHI. L. REV. 401 (1975); Pederson, Formal Records and Informal Rulemaking, 85 YALE L. J. 38 (1975). For a model hybrid rulemaking statute drafted for use in areas of scientific uncertainty, see Charo, A Specific Proposal for Hybrid Rulemaking, 7 COL. J. ENVIR. L. 69 (1980).

21. Other commentators have felt it is necessary to presume that the toxic substance in question was the sole cause of the claimant's injury. See, e.g., Soble, A Proposal for the Administrative Compensation of Victims of Toxic Substances Pollution: A Model Act, 14 HARV. J. LEGIS. 683, 744-45, Model Act §14 at 796-800.

22. See text accompanying notes 42-44, infra.

23. McCORMICK, HANDBOOK ON THE LAW OF EVIDENCE (2d ed. 1972) at §343, pp. 806-07.

24. Id. at 808.

25. WEINSTEIN & BERGER, WEINSTEIN'S EVIDENCE (1980) (hereafter cited as WEINSTEIN), at 300-07.

26. Id.

27. See text accompanying notes 42-80, infra.

28. WEINSTEIN, supra note 25, at 300-05.

29. ROTHSTEIN, EVIDENCE IN A NUTSHELL (2d ed. 1981), at 125.

30. WEINSTEIN, supra note 25, at 301-28.

31. Id. at 301-13.

32. Id. at 300-03. F.R.E. 301 states:

> In all civil actions and proceedings not otherwise provided for by Act of Congress or by these rules, a presumption imposes on the party against whom it is directed the burden of going forward with the evidence, to rebut or meet the presumption, but does not shift to each party the burden of proof in the risk of nonpersuasion, which remains throughout the trial upon the party on whom it was originally cast.

33. 279 U.S. 639, (1929).

34. WEINSTEIN, supra note 25, at 301-24. The New Jersey Supreme Court Committee on Evidence reached the same result, concluding that the rational connection test appears to have little vitality today and has been under vigorous attack. Id.

35. 219 U.S. 35 (1980).

36. Id. at 43-44.

37. WEINSTEIN, supra note 25, at 301-23.

38. Usery v. Turner Elkhorn Mining Co., 428 U.S. 1 (1975). See also text accompanying notes 55-75, infra.

39. See note 60 infra.

40. WEINSTEIN, supra note 25, at 301-26.

41. See, e.g., Supreme Court Standard 303. See also County Court of Ulster City v. Allen, 442 U.S. 140 (1979) and Mullaney v. Wilbur, 421 U.S. 684 (1975). But cf. Patterson v. New York, 432 U.S. 197 (1977).

42. See, e.g., Brooks v. Industrial Commission, 24 Ariz App. 395, 539 2d 199 (Arizona 1975); Clark v. Peabody Testing Service, 265 Ark. 489, 579 S. W 2d 360 (Arkansas 1979); Newgard v. Industrial Commission, 58 Ill. 2d 164, 317 N.E. 2d 524 (Illinois 1974); McDowell v. Town of Clarksville, 241 N.W. 2d 904 (Iowa 1976); Lambert v. Avondale Shipyards, 292 So. 2d 352 (La. App. 1974); DeSa's Case, 3 Mass. App. 711, 323 N.E. 2d 773 (Mass. 1975); Narkeeta Inc. v. McCoy, 247 Miss. 65, 153 So. 2d 798 (Miss. 1963); Griggs v. A.B. Chance Co., 503 S.W. 2d 697 (Mo. App. 1973); Etchison State Acc. Ins. Fund, 16 Ore. App. 344, 518 P. 2d 199 (Oregon 1975); Lewis v. Workmen's Compensation Appeals Bd., 43 Pa. Cmwlth. 70, 401 A. 2d 863 (Pa. 1979); Mazzarella v. I.T.T. Royal Electric Division, 388 A. 2d 4 (R.I. 1978); Watkins v. Texas Employers Ins. Ass'n., 534 S.W. 2d 443 (Tex. Cir. app. 1976); Lipman v. Industrial Comm'n., 592 P. 2d 616 (Utah 1979).

43. *See, e.g.*, Rogers Electric Co. v. Kouba, 603 P. 2d 909 (Alaska 1979) (Upholds Alaska's presumption in favor of compensability); Lawhead v. United Airlines , 59 Hawaii 551, 584 P. 2d 119 (Hawaii 1978) (Presumption of compensability especially designed to ensure compensation when the claimant exhibits an injury or disease -- here, the flu -- which may arise from a variety of causes, including the claimant's employment); Henry v. Schenk Mechanical Contrators, Inc., 169 Ind. App. 178, 346 N.E. 616 (Ind. 1976); Lindsey v. H.A. Lott, Inc., 387 So. 2d 1091 (La. 1980) (Upholds Louisiana's presumption that if an accident is preceded by good health and followed by poor health then the accident is the cause of the poor health); McClelland v. Haggerty Wrecking Co., 384 S.W. 2d 93 (Kansas City, Mo. Ct. of App. 1964) (Upholds Missouri's presumption that an on-site injury is work-related). Similar to the general presumption of coverage is West Virginia's provision that if a condition cannot be positively attributed to a cause other than the compensable injury, it is presumed to have arisen from that injury, Lanier v. State Workmen's Compensation Commissioner, 238 S.E. 2d 687 (W. Va. 1977); Workman v. State Workmen's Compensation Commissioner, 236 S.E. 2d 236 (W. Va. 1977).

44. Mass. Workers' Compensation Law §7A. Note that the Massachusetts presumption applies in cases of fatal unwitnessed accidents.

45. New York Workers' Compensation Law §21. For application of §21, see, e.g., Rayford v. National Union Hospital and Nursing Home Employees, 57 A.D. 2d 975, 394 N.Y.S. 2d (N.Y. 1977); Robles v. Mosgood Theater-Saunders Realty, 53 A.D. 2d 972, 385 N.Y.S. 2d 822 (N.Y. 1976).

46. *See, e.g.*, Goff v. John Bogdan & Son, 55 A.D. 2d 806, 390 N.Y.S. 2d 261 (1967); Goddu's Case, 323 Mass. 397, 82 N.E. 2d 232 (1948).

47. *See, e.g.*, Parsons Corp. of Calif. v. Director, Office of Workers' Compensation Programs, 619 F. 2d 38 (9th Cir. 1980) (The employer has the burden of proof to show, by substantial evidence, that the injury was not work-related); Matter of District of Columbia Workmen's Compensation Act, 554 F. 2d 1075 (D.C. Cir 1976), *cert. denied* 429 U.S. 820 , 97 S. Ct. 67 (1976) (presumption that injury is work-related is difficult to overcome).

48. *See, e.g.*, Downes v. Industrial Comm'n., 113 Ariz. 90, 546 P. 2d 826 (Arizona 1976); Beloit Foundry v. Industrial Comm'n., 62 Ill. 2d 535, 343 N.E. 2d 504 (Illinois 1976); Toomer v. City of Portland, 391 A. 2d 325 (Maine 1978); Anderson's Case, 373 Mass. 813, 370 N.E. 2d 692 (Mass. 1977); Kelley v. N.Y.C.T.A., 39 A.D. 2d 1006, 333 N.Y.S. 2d 764 (N.Y. 1972) *aff'd*. 353, N.Y.S. 2d 164 (1974); Cheldon Radio

Cab Co. v. Workmen's Comp. App. Bd., 10 Pa. Cmwlth. 478, 310 A. 2d 726 (Pa. 1973).

49. *See, e.g.*, Blacker v. Matlack, Inc., 349 So. 2d 916 (La. App. 1977).

50. *See. e.g.*, Amerson v. Employers Ins. Co., 105 Ga. App. 336, 124 S.E. 2d 496 (1962).

51. Russell v. Sohio Southern Pipe Lines, 236 Miss. 722, 112 So. 2d 357 (1958).

52. Mitchell v. Public Employee's Retirement Bd., 28 Ore. App. 339, 559 P. 2d 1325 (1977).

53. Mathies Coal Co. v. Workmen's Compensation Appeals Bd., 40 Pa. Cmwlth. 120, 399 A. 2d 790 (1979).

54. Armco Steel Corp. v. Workmen's Compensation Appeals Bd., 43 Pa. Cmwlth. 443, 402 A. 2d 563 (1979).

55. P.L. 91-172, 83 Stat. 742, 30 U.S.C. §§801 *et seq.* (1969), *as amended* by the Black Lung Amendments of 1972, P.L. 92-303, 2 B.R.B.A. pp. 1-51; as further amended Black Lung Benefits Reform Act of 1977, P.L. 95-239 and Black Lung Benefits Revenue Act of 1977, P.L. 95-277, Vol. A.B.R.B.S. pp. 1-63 (hereinafter known *in toto* as "the Black Lung Act"), and as further amended by the Black Lung Benefits Revenue Act of 1981, P.L. 97-119, to be codified at 26 U.S.C. §9500 (1981).

56. 20 C.F.R. Ch. IV, subchapter B, §§725.202(b), 725.212(3), 725.218, 725.222.

57. Barnette v. Califano, 585 F. 2d 698 (4th Cir. 1978) (no benefits awarded because burden of proof not met by claimant). *See also* Fleming v. Clinchfield Coal Co., 7 B.R.B.S. 302 (1977).

58. The Black Lung Act § 2B 30 U.S.C.A. §902(b) (Supp. 1981).

59. §§411(c)(1), (2). (3), (4) and (5), 30 U.S.C.A. §921(c)(1), (2), (3).

60. The Black Lung Benefits Revenue Act of 1981, P.L. 97-119 (to be codified at 26 U.S.C. §9500) was signed into law on December 29, 1981. It made two major changes in the existing program. First, it altered the tax structure and increased the size of the fund. Second, it repealed some of the presumptions in the earlier Black Lung Act.
The 1981 Amendments transferred provisions of the fund to the Internal Revenue Code, conforming these provisions to those of other similar trust funds. A temporary increase in the excise tax on coal to $1.00 per ton of underground coal and to $.50 per ton on surface-mined coal was mandated, with a limitation of the tax to 4% of the per ton sales price. The amendments also mandated an increase in the interest rate which "responsible operators" must pay on interim benefits that the fund advances so the interest rate approximates existing money market conditions.
Furthermore, the 1981 amendments transferred to the fund the liability for the approximately 10,200 claims previously denied and subsequently reopened and approved under the standards of the 1977 amendments. Eliminated from the program is the obligation to pay retroactive lump sum benefits when an intiial determination of liability is made, but is contested by the operator.
Eligibility standards were tightened by the elimination of the 15-year presumption for pulmonary or respiratory impairments, elimination of the 10-year respiratory disease presumption, and elimination of the presumption applied to miners who had worked for 25 years or more in the mines, for purposes of survivors' benefits.
For a discussion of the Black Lung Act and the adequacy of its compensation, *see* Dept. of Labor, *An Interim Report to Congress on Occupational Diseases* 85-92 (1980). *See also* Lopatto, "Amendments Fight Excesses of Black Lung Statutes," Legal Times, March 22, 1982.

61. 20 C.F.R. §718.203(c), 43 Fed. Reg. 17725 (4/25/78).

62. The constitutionality of this irrebuttable presumption was explicitly upheld in Usery v. Turner Elkhorn Mining Co., 428 U.S. 1, 24-27 (1975). The Court also upheld the constitutionality of the other rebuttable presumptions. A rational relationship test was applied. *Id.* at 23.

63. §4111(c)(3), 30 U.S.C.A. §921(c)(3) states:

> If a miner is suffering or suffered from a chronic dust disease of the lung which (a) when diagnosed by chest reoentgenogram, yields one or more large opacities (greater than one centimeter in diameter) and would be classified in category A, B, or C in the International Classification of Radiographs of the Pneumoconiosis by the International Labor Organization...

64. The Black Lung Act § 2C , 30 U.S.C.A. §902(b).

65. *See* text accompanying note 61, *supra*.

66. Black Lung Benefits Reform Act of 1977, H.R. 95-151 at 6 (testimony of Dr. Daniel Fine). *See also id.* at 7 (testimony of Dr. Edgar Dessen).

67. *Id.* at 5.

68. *Id.* at 6-7.

69. Usery v. Turner Elkhorn Mining Co., 428 U.S. 1 (1975).

70. *Id.* at 28.

71. 219 U.S. 35 (1910).

72. *Id.* at 43.

73. Usery v. Turner Elkhorn Mining Co., 428 U.S. 1, 28, *quoting from* United States v. Gainey, 380 U.S. 63, 67 (1965).

74. Usery v. Turner Elkhorn, *id.* at 28-29.

75. *Id.* at 29-30.

76. H.R. 9616 (95th Congress, 1977).

77. Soble, *supra* note 21, 14 HARV. J. LEGIS. at 796-800.

78. *See* H.R. 9616 §14(c).

79. H.R. 9616 §14(b)(3).

80. H.R. 9616 §14(d) states:

> For any claim for certification as a victim pursuant to §16, the only showing required of the person filing a claim, necessary to give rise to the rebuttable presumptions of (b), shall be -
> (1) the opportunity for exposure to the toxic substance within the known geographic scope of the toxic substance pollution if definable under §15;
> (2) the opportunity for such exposure over a sufficient time span, if defined under §15; and
> (3) an injury or disease pursuant to §13."

81. For comparison, workers' compensation statutes generally provide for one-half to two thirds of average weekly wages. LARSEN, *supra* note 14. The adequacy of workers' compensation has been severely criticized. REPORT ON THE NATIONAL COMMISSION ON STATE WORKMEN'S COMPENSATION LAWS (1972);

WHITE PAPER ON WORKERS' COMPENSATION, U.S. Depts. of Labor, Commerce, H.E.W. and H.U.D. (1974). Chart V in U.S. Chamber of Commerce, *Analysis of Workers' Compensation Laws*, shows that although more states provide benefits measured by two-thirds of wages, most have very stringent limits on the maximum weekly benefit; E.g., as of January 1, 1980, Ala. $136, Ariz. $192, Colo. $222.73, Conn. $261, Del. $164, Fla. $211, Ill. $353, La. $149, N.J. $185, N.C. $194, N.Y. $215, Tenn. $107, Tex. $119, Va. $199.

82. On the collateral source rule *see generally* Comment, *The Collateral Source Rule: Double Recovery and Indifference to Societal Interests in the Law of Tort Demands*, 2 U. PUGET SOUND L. REV. 197 (1978); Fleming, *The Collateral Source Rule and Loss Allocation in Tort Law*, 54 CAL. L. REV. 1478 (1966); Note, *Unreason in the Law of Damages: The Collateral Source Rule*, 77 HARV. L. REV. 741 (1964). The collateral source rule initially provided that no mention could be made in a trial of collateral sources; otherwise the wrongful tortfeasor would gain an advantage. The reason for the rule is no longer convincing since punitive element of tort law is no longer stressed. No-fault compensation plans generally require credit for collateral sources. Professor O'Connell has suggested that the deduction of collateral sources be applied to all "insurance-like" sources both public and private, including social security. O'Connell argues that in death cases, and even in the case of public and private pensions exceeding the payee's vested amount, as well as in term life insurance, the plaintiff's receipts should be subtracted as a collateral benefit. O'Connell, *A Proposal to Abolish Contributory and Comparative Fault, With Compensatory Savings by Also Abolishing the Collateral Source Rule*, 1979 U. ILL. L.F. 591.

83. *See supra* note 15.

84. *See* Dep't of Labor, An Interim Report to Congress on Occupational Diseases 65-78 (1980). *See also* note 81 *supra*.

85. *See*, note 13, *supra*.

86. Another possibility mentioned was to set the limit in relation to the average income for the state or region.

87. *See generally*, note 82, *supra*.

88. *See* Part II, Dimensions and Complexity of the Hazardous Waste Problem, and Appendix J.

89. *See* note 12, *supra*.

90. Federal delegation normally leaves states free to designate the appropriate agency to assume the delegation. *See* note 12, *supra*.

91. *Compare* Clean Air Act §110(a)(2)(F), U.S.C. §7410(a)(2)(F), requiring state implementation plans to have "necessary assurences that the State will have adequate personnel funding and authority to carry out such implementation plan".

92. State contributions are a normal part of federal-state cooperative legislation. *See*, *e.g.*, C.W.A. §402, which provides for state contributions to federally financed public waste treatment works.

93. *Compare* CERCLA §§211 and 221, establishing Hazardous Substance Response Trust Fund.

94. One member believes that if the Tier One system is not funded from general tax revenues, claims for compensation for injuries for exposure to hazardous wastes disposed of *prior* to the adoption of this proposal at non-orphaned inactive sites should not be compensated from the Fund but instead left to existing State statutory and common law remedies. Otherwise, he believes that the Fund would quickly be depleted and that an incentive would be created for parties to close active ongoing sites. Permitting recourse to the Fund without subrogation in a non-orphan situation only for prior disposal at a site which continues in operation would encourage continued operation of existing disposal facilities in his view.

95. Administrative Procedure Act, 5 U.S.C. §706(2)(A)(Supp. 1981).

96. Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402 (1971).

97. For discussion, *see* Part IIIA, *Liability for Personal Injury When Ownership Has Changed*, *supra*.

98. For Discussion, *see* Part IIIA, *Plaintiffs*, *supra*.

99. For discussion, see Part IIIA, *Apportioning Damages*, *Nature of Liability, Joint or Several*...*supra*.

100. See Reyners, *Compensation for Nuclear Damage in the OECD Member Countries*, in MacNeil, ed. COMPENSATION FOR POLLUTION DAMAGE (1981); *Compensation for Nuclear Damage in the OECD Member Countries*, 20 NUCLEAR LAW BULLETIN 50 (1977); OECD, NUCLEAR LEGISLATION: ANALYTIC STUDY (1976).

101. The Paris Convention has been ratified by Austria, Belgium, Denmark, France, Federal Republic of Germany, Greece, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, and the United Kingdom. OECD, NUCLEAR LEGISLATION: ANALYTIC STUDY 11, (1976).

102. For discussion, *see* *supra* Part IIIB.

103. For discussion, *see* Analysis of Rebuttable Presumptions, in the Fourth Recommendation, *supra*.

104. *See* New Jersey v. Ventron Corp., 182 N.J. Super. 210 (App. Div. 1981). *See also supra* discussion in Part IIIA, Strict Liability.

105. *See* Part IIIA, *Available Causes of Action for Damage to Private Property and Environmental Interests*, *supra*.

106. For example, in May 1978 the town of Bedford, Massachusetts closed four wells which were accidentally discovered to contain up to 2,100 ppb of dioxane and up to [illegible]00 ppb of TCE. Bedfore responded to the crisis by restricting water use, instituting an increased block rate water structure and banning new water connections. The community also purchased water from four neighboring towns until one of them closed two of its main wells due to trichloroethylene contamination. The cost of buying outside water and conducting engineering studies placed a large financial burden on the town. Comm. of Mass., Special Legis. Comm. on Water Supply, "Chemical Contamination: Working Paper for the Water Quality Task Force," (Boston, 1979) at 11-12; cited in C.E.Q., ENVIRONMENTAL QUALITY 1980 at 97. Similarly, 16 private drinking water wells were closed in 1977 when the town of Gray, Maine discovered trichloroethylene, freon, acetone, xylene and dimethyl sulfide had leached into the well water from a nearby McKin Co. facility. The well water was not only offensive in taste and odor, it could even discolor laundry. The residents turned to alternate supplies of water, eventually extending the town pipeline. E.P.A., Oil and Special Materials Control Division, "Damages and threats Caused by Hazardous Material Sites," WH-548 (1980) at 2; cited in C.E.Q., *id.* at 98.
For a popular description of the pollution of private wells in Atlantic City, N.J., *see Troubled Water in Atlantic City*, DISCOVER March 1982, pp. 76-80.

108. 42 U.S.C. §9607 (Supp. 1981).

109. *See supra* Part IIIA, State Hazardous Waste Statutes.

COMMENTS ON THE REPORT

July 30, 1982

Honorable John D. Dingell
Chairman, Committee on Energy and Commerce
United States House of Representatives

Honorable Robert T. Stafford
Chairman, Committee on Environment and
Public Works
United States Senate

Re: The Report of the Superfund Study Group

Dear Mr. Chairmen:

It is with considerable pride that I transmit this Report to Congress. The Study Group is comprised of members who possess a diversity of background and experience - - all with high levels of competence and prominent reputations in their respective fields.

Reflective of these diverse and sometimes opposing experiences, the members came to this project with a variety of opinions, philosophies and perspectives. These views were discussed and examined in our hundreds of hours of deliberations, which in turn were the product of thousands of hours of individual effort. Substantial agreement was reached on a number of the major issues at hand. However, as could be expected in such a frontier area as the hazardous waste tort field, total agreement on every issue was not reached. Yet the Report represents a coherent meshing of the various positions of the members and the subsequent agreements reached. It provides Congress with a basic framework for approaching victims' compensation in the toxic tort context. It also presents alternatives to the main ten recommendations, alternatives advocated by various individual members of the Group.

Professor Anderson sums it up well in his statement entering additional remarks. He notes that it is not his intention by submitting comments to deflect Congress from taking effective action. In endorsing the majority's proposal, he correctly states that "it points the way to a far better system than the unaided comon law provides today to victims of harms from hazardous substances."

I commend the Group for its efforts and recommend the Report as an important first step toward addressing this major national concern. I thank the Reporter, Professor Frank Grad, and his staff at Columbia University Law School for their herculean efforts. I acknowledge the Department of Justice for its substantial assistance in obtaining our goal.

As Chairman of the Group, I trust that this contribution will be valuable to the Congress as it attempts to deal with this complex area of the law.

Very truly yours,

James R. Zazzali

JRZ/ab

JOINT STATEMENT OF
MESSRS. ANDERSON, BREITEL, FREEMAN, AND O'CONNELL

A fundamental weakness in the Report is in the relationship between the Tier One and Tier Two remedies. For understandable reasons of trying to accommodate sharply differing opinions, a clear choice could not be made between the limited, administrative remedy in Tier One and the plenary remedy on Tier Two. It is our opinion (1) that Tier One should be the primary source of compensation for most claims and losses, (2) that Tier Two be available only for exceptional cases, and (3) that ordinarily an election must be made between pursuing a claim on Tier One or Tier Two.

We would prefer a system providing discretionary judicial approval before a claimant may bring a plenary action at the Tier Two level, if he had previously elected to pursue the more limited administrative remedy at Tier One. But before such an election should be imposed, the ideal of using the administrative procedure for the anticipated mass of smaller claims should provide larger benefits than those described in the Report. Not only should the claimant be entitled at the administrative level to recover the economic losses as limited and the medical expenses incurred, but he should also receive, subject to an aggregate upper limit an award for the psychological, social, and related injuries sustained by him geared to tangible events objectively identified as physical and neurological consequences of the physical injuries. These may be classified in schedules or categories with variable fixed upper limits, the precise award to be determined by the administrative agency.

The election to obtain the enhanced administrative award should be binding, unless the claimant can satisfy a court on application that he should be permitted to pursue a plenary action because of a bona fide unanticipated cause of action for damages, available under general tort standards, beyond those recovered by him at the administrative level. In addition to pursuit on Tier One of smaller claims and those when claimant did not anticipate a valid Tier Two remedy, the limitation on pursuit of both Tier One and Tier Two remedies is intended to apply to those with larger claims who wish to pursue the prompter, more limited remedy in Tier One as opposed to the riskier, if more generous remedy on Tier Two. Such an election avoidance procedure should provide a set of standards to be satisfied before the application to pursue Tier Two be granted. The standards should embrace: genuine and reasonable mistakes as to the extent of injury or its consequences; lack of opportunity or availability of legal or other advice sufficient to alert the claimant to the consequences of electing to pursue the administrative remedy; new evidence or advances in medical knowledge to indicate the seriousness of likely consequences of the injuries sustained; the absence of motive to have used the administrative remedy principally as a preliminary to bringing a plenary action; the merits of the proposed plenary action; and such other factors as would make substantially unjust or unconscionable the denial of a further remedy to the claimant by way of plenary action. The object of the system would be to utilize, as intended, the administrative remedy to handle claimants who cannot economically or practically pursue plenary actions (as well as those with larger claims mentioned above preferring the administrative remedy), and to reserve the plenary action for the fewer larger and exceptional claims where such actions are more economically feasible.

The foregoing are merely suggestive of the type of procedure contemplated in order to promote serious consideration of an elective procedure which should not be manipulatable permitting abuse of the administrative remedy and the multiplication of procedures rather than a simplification of available remedies. At the same time the administrative remedy should encourage its use by not eliminating many components of damage, while provable objectively, but yet going beyond the loss of income and medical expenses.

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Statement of Frederick R. Anderson

The late Kermit Gordon introduced me to Academica Microcosmographica, a slim tome by the Cambridge classicist, H.M. Cornford. Gordon pointed out that Cornford may have actually succeeded in discovering all the essential parliamentary techniques for ensuring that legislative bodies never agree to take action. For some reason, Gordon thought that this book was essential to my understanding of life in Washington.

One of the ways which Cornford identifies for ensuring that a deliberative body does not adopt a proposal is to field numerous alternatives to the proposal for comparison and debate, which then hopefully will be endless, producing deadlock. By entering additional remarks alongside those of my fellow panel members, however, it is not my intention to help deflect Congress from taking effective action. I have endorsed the majority's proposal, and I believe it points the way to a far better system than the unaided common law provides today to victims of harms from hazardous substances.

But I also believe that Congress could adopt a stronger, more effective measure than the compromise embodied in our report. By this comment and the statement which I co-signed with my colleagues Breitel, Freeman, and O'Connell, I try to indicate where the path to a better compensation scheme lies. Whatever form a final bill may take, the important point is that action is needed, for the reasons of compassion, risk minimization, cost internalization, and law reform touched upon in the body of our main report. The diversity of opinion among panel members should serve to help Congress fashion a better final compensation plan; it should not become an excuse for inaction.

The primary shortcoming of the panel report lies in our failure to make the difficult, even painful, choice early in our discussions between recommending that compensation occur primarily through liberalized statutory common law actions in which judges hear virtually all cases, or recommending that a new administrative system be created as the near-exclusive means of compensating victims. The failure to make this hard choice has resulted in a proposal which, despite the great appeal of Tier I standing alone, is unnecessarily duplicative, inefficacious, and inequitable. To compromise differences arising between a few panel members who strongly preferred that no statutory intervention at all occur to hasten the evolution of existing remedies at common law, and other panelists who favored one statutory scheme or another because they believed that existing common law remedies were inadequate, we designed a plan that tried to please both. In so doing we did what attorneys do very well -- we created new legal remedies to be coupled to those already in existence. Designing new procedures is the policy-minded lawyer's stock-in-trade. But at some point managing conflict by generating procedures becomes the jurisprudential equivalent of the treasury's printing new money, with analogous results. I believe we may have reached that point.

Almost no one favored concentrating our efforts solely on statutory reform of the common law, perhaps through a federal or state statutory cause of action that would authorize judges and parties to utilize the innovations incorporated in the Tier I administrative recovery contemplated by the panel's proposal (new presumptions, a shift in the burden of proof, presumption documents, joint and several liability). I regret that this path was not taken, although I note that in his separate comments Judge Breitel reminds us of our neglect of the Tier II remedy, which he states is in "dire need of legislative relief" (II,6). In 1978, in testimony before the Subcommittee on Consumer Protection and Finance of the House Committee on Interstate and Foreign Commerce (Serial No. 95-150, 95th Congress, 2nd Sess. 348), I suggested a liberal federal cause of action for injury from hazardous substances, checked somewhat by administrative certification via a new type of criteria document. The criteria document would discuss substances and families of substances and would certify that their disease-causing characteristics merit generous statutory presumptions and burden shifts which the court would apply in finding the facts and determining awards. (This concept resembles the "presumption document" found in the Tier I remedy).

With the current aversion to creating large new bureaucracies resembling those which administer the worker's compensation or HHS programs, I thought that leaving the matter for further experimentation by the courts, with some statutory help onthe causal problem, would appeal to legislators. The arguments against this and similar approaches are that they may be slow, that they deal awkwardly with large classes of plaintiffs, and that the smaller claims may never be adjudicated. My colleagues were apparently persuaded by these objections to a new federal statutory cause of action, and we abandoned this path early in our deliberations. In retrospect, however, I wonder if we were wrong to forsake this alternative so quickly. Others have not been similarly dissuaded. For a more detailed proposal for a liberalized state statutory cause of action for compensation, which is coupled with an administrative compensation remedy, see Jeffrey Trauberman, "Compensating Toxic Substances Victims: A Proposed Model Statute" (Environmental Law Institute: 1982).

Tier I suggests a number of innovative elements on which a thoroughgoing, near-exclusive administrative compensation plan could be based. Tier I is the indispensable nucleus for the proposal endorsed in our separate, co-signed statement. I only want to emphasize that the co-signers agreed that more generous recovery on Tier I than the panel draft contemplates is both necessary and feasible, especially if access to the plenary Tier II action is to be drastically curtailed. Some harms not adequately compensated in Tier I include impaired fertility, chronic miscarriage, various forms of neuropathology, teragenic effects, and fear of future cancer or of transmission of genetic effects to future generations -- all difficult to put a price on in any forum, but worth the effort in order to fashion an adequate compensation scheme. I concede the concern of some of my colleagues about the impact of expanded compensation on the need for simple insurable events, the indeterminancy in awards, and the enticement to some victims (as the agency's schedules of recoverable harms expand) to appear to suffer more than fellow citizens who are made of sterner stuff. But I believe we should enlist the help of medical science in making these awards just and adequate, rather than focusing on keeping them small and definite, merely because they are somewhat subjective and still imperfectly understood from a medical viewpoint. Dismissing them as non-compensable "pain and suffering" does not do justice to the victims, nor does it force us to develop a better institutional response to the problem of hazardous substances compensation. As this effort yields results, the concern for limiting access to the plenary common law action should diminish, especially if the courts carefully apply the discretion entrusted to then under the formula in our co-signed statement.

Others have noted that our mandate directed us to examine recovery for injury from the broad category of hazardous substances, not merely from hazardous wastes. I share the concern that we did not frame our inquiry broadly enough, but the proposals discussed herein, and our conclusions about the inadequacy of the common law, both can be generalized to apply to the entire spectrum of common law recoveries for injury from hazardous substances. Admittedly such an enterprise would require contending both with categories of cases not fully analyzed here (injury from pesticides, radiation, drugs, chemicals in use, consumer products, etc.) and with an array of statutes for the protection of consumers, workers, patients, travellers, and others, but the framework for analysis and the basic criticisms remain the same.

One final comment: the reader of our report may be struck by how we seem to assume that hazardous substances injuries will occur in episodes involving either large numbers of victims injured only slightly, or few victims injured severely. It is at least as likely, however, that injuries will not conform to this pattern; rather, they may occur in episodes injuring a significant number of individuals severely, at least so far as hazardous wastes are concerned. I want to stress that Tier I recovery reaches far beyond small mass claims. Some Tier I recoveries for lost wages and medical expenses may be quite large. Nothing in our report would operate to keep Tier I recoveries at arbitrarily low levels, and, of course, if the liberalization recommended in the co-signed comment occurred, recoveries would be even larger.

COMMENTS BY CHARLES D. BREITEL, STUDY GROUP MEMBER

I regret that I cannot vouch for the Report by the Study Group. It is not that I believe that the work of the group has not been valuable. Within a far too limited time provided for the study, the Reporter and his staff have expended prodigious energies, especially of value in uncovering the problems and difficulties of solution. But for reasons that I will state without extended elaboration, the limited recommendations are neither practical, desirable, nor reliable. Nor can I accept the limited recommendations as free-standing suggestions.

I.

1. I read the statute which created the Study Group to direct expressly a study of the problems associated with toxic substances as covering all toxic substances and not merely the problems associated with hazardous wastes.

2. Even if the study directed were confined to hazardous wastes, that is, dump sites and spills of toxic substances, analytically the remedies do not permit such confinement. There are inextricable relationships among the issues of responsibility and liability, statutes of limitations, causation, components of damage recovery, latency of harm caused, social cost-benefit

analyses, deterrence, governmental regulation, and national interests in encouraging some (but not all) hazardous activities. Some (but not all) hazardous activities are rooted, necessarily, in the revolutionary development of a technological society in a competitive world. Most rules applied to hazardous waste sites and spills should and will, sooner or later, inevitably apply to toxic substances in general, whatever may be professed or intended.

3. The extraordinarily limited structure of the study group, without sufficient supporting staff, independent advisors, and informed and interested offerings from relevant disciplines and concerned enterprises in this difficult field, doomed the study group's work to be time-pressed, subject to unsuitable compromises in attempting to reach a consensus, and the ignoring of problems in devising a plenary remedy at the so-called Tier 2 level.

4. The fact is that in this century our world, and this nation in particular, has undergone a technological revolution in which chemistry, physics, medical science and research, electronics, and mechanics, have conjoined in a bewildering multitude of uses. These uses have provided a contra-Malthusian profusion of affluence of nutrition, services, medication, transportation, clothing, shelter, and countless other benefits regarded as positive and even essential goods. At the same time, the terrible costs of this revolution in disease and death to human beings and equally terrible costs to the environment, have been uncovered, some foreseeable and some not.

Without a global assessment, presumed remedies may be destructive of the benefits and may not alleviate or eliminate the costs, as a matter of technology or economics.

5. More technically, in assessing a desirable and just scheme of responsibility of the society itself, the industry, the enterprises, or entity, man's knowledge has to be classified. There are toxic substances and wastes which were, on any test, deemed not harmful and even beneficial at one time. And there are substances today, without any determinable responsibility, which appear to be utterly harmless or even beneficial or essential, which later, or tomorrow, will have been discovered to be toxic singly or in synergistic relation with other substances. There are also substances which for a variety of reasons should have never been used or devised without exhaustive testing, and the nature of the responsibility turns on the view one takes whether the possibility, even remotely, of harmful effects should have, with sufficient care and conscientiousness, been exhaustively tested before use or invention. Then, of course, there are the "easy" cases that enough was experienced, or known, even if very incompletely, to have put generators of the now-questioned substances, on notice of possible hazards.

6. Yet the immediately preceding discussion would still leave a gnawing residual problem. There are many hazardous substances and activities which must be balanced against the then- or presently-available alternatives. In preventing many of humanity's ills, disasters, and malnutrition, elimination

of hazardous substances and activities without a then-known alternative or one now known, the costs in death, disease, and environmental harm may be or may have been greater than that caused by the hazardous substances and activities.

7. The point is that the pristine jungle is not a safer place for human habitation or activity than the inevitably danger-ridden civilized society, which has given us the boon (problem) of enormous growth of population with increasingly greater longevity and health.

8. Against this backdrop, I cannot accept the Report's solutions in a narrow area without relation to the overall framework in which they are to fit.

II.

I have concrete difficulties with some of the Report's recommendations.

1. The analyses of fault, absence of fault, strict liability, and in some instances, absolute liability (however labelled), are in my opinion flawed. Whenever in our system persons or entities are held responsible for their activities there is always some degree of fault involved, even in "no-fault" contexts, if only because they are engaged in hazardous activities which have little or no social value. This is not to be confused with activities which are hazardous only if high, even the highest, degrees of care do not accompany engaging in the activity. (See, for one instance, the discussion, at pages 95—107 of the Report, of ultra-hazardous and

abnormally hazardous activities with the suggestion that there was a marked change between Restatement, Torts and Restatement, Torts, Second §522 [cf. Restatement, Torts, Second, Tentative Draft No. 10, §520, Notes to the Institute]. Compare the discussion about the disagreement between the late William L. Prosser and Restatement, Second, on §520, although he had been the chief reporter for Restatement, Second, and for Tentative Draft No. 10.)

2. Subject to what I have said earlier, I strongly agree with the recommendation for an administrative remedy at the so-called Tier 1 level. However, I do not agree that there be a binding election between pursuing the administrative remedy or a plenary action. On the other hand, I cannot accept the proposed "exit toll" between the two because it most likely will clutter both the administrative agencies and the courts with proceedings. The "exit toll" is not severe enough to avoid "gambling", that is, obtaining easy recoveries at the administrative level, and then pursuing the plenary action. An alternative proposal with which I agree appears in the joint statement of Messrs. Anderson, Breitel, Freeman, and O'Connell which immediately follows the Report.

3. With respect to subrogation of administrative claims, I have the same concerns earlier expressed as to the nature of the responsibility upon which liability will be attributed to the actors in causing the harm.

4. With respect to presumption documents, I disagree with the notion that the more difficult it is to prove causation,

then the stronger must be the presumption. This can lead to the reductio ad absurdum that if causation is not provable at all, then there must be a claim-saving presumption. A good presumption should reflect realities and merely satisfying a constitutional limitation is not sufficient. Hence, a good presumption must be one that can be demonstrated to have a high probability, not merely that it is more likely than not to have reflected a true fact.

5. Of course, for the reasons earlier indicated "good" presumptions cannot be practically limited to the administrative remedy, whatever one may say about it. Nor should they be.

6. I disagree with the studied neglect of the plenary action remedy. It is in dire need of legislative relief, with proper attention to all the social and economic ramifications and limitations. It is not enough to leave the development to case law at the hands of adventurous claimants and their lawyers, at the excessive cost to the litigants and the court systems, and over the many years that such a development may entail.

7. I agree that in connection with toxic substances, limitations periods should be based on discovery, and not the causing events. But, here again, I would require a much better definition of when responsibility attaches to activity, and that it not be determined by an oversimplifed analogy to "no-fault" concepts, "strict liability" in the products field, or the "absolute liability" in the abnormally hazardous activities

area of the law. Without doubt, this would be one of the toughest problems to resolve, but there is no escaping it, unless we conclude, as I do not, that the traditional categorical tort remedies, even by "analogies", will suffice. Indeed, one should recognize that toxic substances, generally, including the waste disposal problem, in the absence of the usual "fault" or "responsibility" tests present a new and unprecedented kind of tort liability. Hence, it calls for a new design. Nor am I made to feel secure by the optimism of practitioners in the traditional tort field that time and the case law system will resolve all the global problems for the society or the innocent victims of its new affluence.

8. Because a legislature would be irresponsible if it enacted proposals which would destroy or seriously impair enterprise activities which our society as a matter of legislative policy determines must be retained at all or even high costs, no program for their approval should be recommended unless this consideration is factored into the analysis to support the program. Moreover, the answers to this kind of cost-benefit analysis determines whether there should be general tax revenue to compensate for harm to toxic victims and the environment, or whether there should be narrower levels of liability, provided the cost can be passed on to discretionary beneficiaries of the activity. Otherwise, the cost burden translates into an excise or sales tax which may be a retrogressive tax on the people. On the other hand, if the offending activity is one that legislative policy determines must be

permitted, then victims harmed by the activity should be amply compensated, as we do, in workers' compensation, but at higher levels. In this narrow context, it may or may not be material whether the burden is borne by the entity, the enterprise, the industry, or the society at large. It is material that we do not make the victims serve the public good by their misery as we necessarily do with soldiers in war.

CONCLUSION

I have touched only on some of my principal concerns. I have not elaborated on these or the other concerns I may have, since my purpose is no longer to persuade, but to explain why I am not able to join in vouching for the Report.

I am firmly convinced of the critical need for a rich legal development in the area of toxic harms. I am unqualifiedly satisfied that innocent victims of the technological revolution should be compensated — and amply — with respect to whatever hazardous activities are essential to society's need, survival, or the enrichment of life. It also is imperative that the primary concern for the future is to eliminate hazards, wherever possible, and that any compensation system, with limited or unlimited liability of actors or their insurers, must operate to the maximum extent to deter nonessential hazardous activities and to make standards of responsibility conducive to the highest standards of care. Studied or careless ignorance is just as much a ground for liability as direct knowledge of the risk.

In this context, the protestations of entrepreneurs (who benefit from the generation or disposal of toxic substances) of their innocence of fault or their essentiality to the society, must be viewed with an objective or even a skeptical mind, but not an unduly cynical one.

All of us, in a social sense, are a cause of the problem, either as beneficiaries or as victims. All of us must pay for the consequences of toxic harm, but the cost must be shared justly and, at the same time, feasibly. There are the alternatives and imperatives of rigorous government regulation of hazardous activities, social insurance for innocent victims of our past errors or future primary needs deemed essential on a cost-benefit analysis, the deterrence of dispensable activities, and the deterrence of actors with capacity to reduce or eliminate hazards. Beyond all this, there may be the limitations of society to compensate for or ameliorate toxic hazards, which in some measure may be another example of the unavoidable hazards of life generally.

The work of the Study Group and its Report are a first step, and a good one, if they inspire a new and broader effort with the same objective. One thing is certain, the society able to provide adequate remedies on the scale required must also be economically productive and its enterprises capable of surviving economically in a competitive world no longer confined to the opposite sides of the North Atlantic Ocean.

* * * *

(cont.)

I anticipate that some of the Study Group may add their comments to the Report as I have done. In such event, it is highly likely that I will agree with some of the views expressed, as indicated, for example, in the joint statement to which I have referred, but I will not have had the opportunity to express such agreement in this commentary because of the time limitations for the publication of the Report, the physical dispersion of the group, and the difficulties in achieving rapid exchanges of views without further unacceptable delay.

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COMMENTS OF
GEORGE CLEMON FREEMAN, JR. [1]

I agree with some but not all of the recommendations in the Report.[2] There are also several important matters on which we spent considerable time that are not dealt with adequately in the Report. I address these matters in this separate statement.

1. Judge Breitel's Separate Views

Before turning to the Report, I commend the thoughtful comments of the most distinguished member of our Study Commission, Judge Charles Breitel of New York. I agree with Part II of his statement and his Conclusion. While I also agree with his general observations in Part I, I would like to make two comments.

First, after much thought, I do not put as much distance between myself and the Report. I participated in the give and take of its formulation and suggested substantive points and language changes. Some were adopted; others were rejected. The final Report, like the product of most committees, is incomplete, sometimes inconsistent, and sometimes deliberately silent or obscure. These flaws are usually unavoidable in the elusive quest for consensus. Despite the Report's weaknesses, it focuses on the crucial legal issues in the area of the generation, transport and disposal of hazardous wastes. But I agree with Judge Breitel that these issues need to be resolved with additional views outside the legal profession. As he points out, they merit consideration by a much broader community, including economists, businessmen, political scientists, and medical and scientific experts. Thus I join in urging that before Congress or the States act on any of the recommendations of this Report, they need to hear from these other disciplines, particularly the economists.

Second, I do not regard our decision to limit our focus as a default. It was a practical solution to the otherwise impossible problems posed by our deficiencies in time, personnel and perspective. Moreover, the reasonableness of our early decision to confine ourselves to what was feasible should also be viewed in light of how the Study Group was authorized. Section 301(e) of the Superfund Act was part of a political compromise. It was a substitute for specific provisions in the Senate Bill that would have created a limited Federal plenary action in tort for persons injured by many toxic substances. Opponents of the Senate bill's provisions voiced a number of concerns. Those concerns were addressed in two ways in the enacted legislation. First, the final Superfund Act was limited to provisions for the cleanup of spills and disposal of hazardous wastes. Second, the federal tort action provisions were deleted and our Study was mandated.[3] The remaining concerns were reflected in the charge given our Study Group by Section 301(e).[4] Our study, limited as is, addresses those issues. And in this context, it is significant that none of us thought that creation of a federal tort remedy was necessary or desirable.[5] Instead, we recommend a more limited Federal social insurance scheme, which would be far less disruptive of the economy and existing legal obligations, less burdensome on the Federal courts and more consistent with our Federalism.[6]

At the same time, I agree with Judge Breitel that a much broader reexamination of all the aspects of our legal system governing liability for all toxic substances is needed. Indeed, I would extend it to encompass other facets of "tort" law that also are in ferment: products liability, occupational diseases, automobile accidents and airline accidents. There are Constitutional and legal principles that are common to all of these areas of the law. These principles, as well as their application or nonapplication in any particular area, merit serious review. Any inconsistencies among these fields should be rational and deliberate, rather than the result of political accident, as happens all too frequently. Finally, the composite incidence of all these laws on our society -- the economic, political and other social effects -- needs to be assessed to see where change is needed and which changes would actually be in the public interest.

2. The Report's "Tier One" Recommendations.

A. "Orphan" Sites. -- I join in the recommendation of a limited social insurance system to aid persons who have been injured in the past through the disposal of hazardous wastes at sites that are now "abandoned" or "orphaned." State common law and most present State statutes provide no adequate remedy to compensate victims of improper disposal of hazardous substances at "orphan" sites. Since it is reasonable to assume that most of these wastes originated in past industrial activities in interstate commerce, it is also reasonable to assume that the country has benefited generally from the economic activities that generated them. From hindsight, we can see that improper disposal of these wastes in the past was in part attributable to the failure of our State governments to use their police powers adequately to control hazardous waste disposal or of our Federal Government to do so through its commerce power. Society as a whole should share some of these costs by providing compensation to those injured for actual injuries to health and for loss of wages which have not been compensated by other means. Since we are dealing with past conduct, the government, either at the State or Federal level, affords the only practical means of providing this limited compensation.

Because of the probable interstate commerce origin of these wastes and the Federal Government's greater taxing resources, when we discussed this matter last fall it appeared reasonable to recommend that the Federal Government fund this program. But since then several States have enacted or are considering State laws somewhat similar to our Tier One recommendation. California, for example, did so on September 25, 1981.[7] New York reportedly considered such a law this year.[8] If a substantial number of the States in which most of these orphan sites are located adopt appropriate legislation by the time Congress considers legislation along these lines, the practical need for Federal legislation dealing with orphan sites may have disappeared. In any event, Congress should take careful note of the States' ongoing efforts and take advantage of their experiences under their new statutes.

B. Existing and New Sites. -- I also join in the recommendation for creation of a Federal Tier One System to aid persons injured by hazardous wastes at ongoing or new disposal sites because it may be regarded properly as an incidence of Federal regulation of these sites under the Resource Conservation and Recovery Act (RCRA). Equally important, our current State tort systems generally do not provide a satisfactory means for dealing with relatively small claims whatever their origin.[9] Except where there are a number of similar small valid claims arising from the same situation that may be consolidated into a single trial, the expense of litigation often precludes recovery. Where the injury arises through the deliberate or negligent action of others, leaving the loss totally on the victim is obviously unfair. Also public awareness of this general deficiency of the present tort system may strengthen public opposition to socially needed or desirable economic activities in which the generation, transportation or disposal of hazardous wastes is unavoidable. Thus the creation of a social insurance compensation system would not only be fairer to those who are injured from hazardous wastes through no fault of their own, but also could lead to greater public acceptance of RCRA licensed hazardous waste management facilities that may be essential to our long term economic prosperity.[10]

C. The Limited Extent of Our Knowledge. -- I wish to emphasize that while I support the general concept of a Tier One system, subject to the reservations expressed below, I do not do so because I believe that there are many persons who have been injured by exposure to hazardous wastes and not compensated from other sources. Contrary statements in the Report have no basis in the information available to us. Repeated requests by the Group to the Justice Department for relevant "hard" evidence currently available to it and to EPA as to the extent of this problem produced very little.[11] Our Study Group had no practical means of remedying this lack of information since we were not constituted to be a fact-finding body. The Report correctly indicates the Group had no alternative but to conduct its Study on the assumption that substantial health problems caused by hazardous wastes exist and will occur. But statements to the effect that "some more evidence of hazard has become available" reflect neither a finding by the Group nor my personal view.[12]

D. Funding of a "Tier One" System. -- Based on the information available to the Study Group -- or, more accurately, the lack of information -- I cannot join in the Group's recommendation that the Tier One System be funded by a special tax on the chemical and oil industries, and perhaps other selected industries, rather than from general tax revenues.[13] The Study Group knows virtually nothing about the probable magnitude of direct costs of a Tier One system. Those costs would include funds paid to claimants and administrative costs.[14] Potential claims would include (a) those attributable to exposures to wastes disposed of prior to the enactment of any Tier One system and (b) those resulting from exposures to wastes disposed of after that date. The special tax the Study Group proposes would have to fund the total costs of "pre-enactment" disposal based claims, while subrogation would fund some of post-enactment based claims.

It is reasonable to suppose that most of the pre-enactment activities involving waste transportation or disposal were not licensed under RCRA, while virtually all of the post-enactment activities will be licensed.[15] Little is known about the actual nature, extent and location of hazardous wastes disposed of in the past across this country.[16] Also, virtually no information is available on the nature and extent of any personal injuries or property damage such wastes may have caused.[17] Turning to claims based on future activities, the potential costs of a Tier One system are also equally unpredictable. It is reasonable to suppose that the frequency of claims based on future disposal is more controllable because of the much greater care RCRA licensing will require. But there is always the problem that things viewed as harmless from today's knowledge may prove hazardous from tomorrow's hindsight. The only way to guard totally against the dangers of the currently unforeseeable consequences of economic activities is not to undertake them. But I do not see how anyone could seriously advocate society's prohibiting all activity that has not been proven to be "risk free."[18] The economic and political consequences of imposing a "risk free" standard of care on all economic activity would literally wreck our society.

The Parkinson's Law of bureaucratic programs insures that claims will be made and money spent under any government compensation system. If in such a system cancers which have multiple actual causes are presumed by law to have been caused solely or primarily by exposure to hazardous wastes, the potential for abuse is apparent. Thus while we could be confronting potential claims that aggregate only several millions, these claims might soar into billions.[19] Indeed, any dollar estimates of the costs of a Tier One system made in the near future may prove as erroneous as those made for the Black Lung Fund when it was amended in 1977.[20] The principal incidence of these unknown costs would fall, through the Tier One tax, on the chemical and oil industries. We have no idea what the economic effects would be on these industries and our economy.

In contrast, we know that our American economy is part of a world-wide economy, that many American industries are now being severely challenged by foreign producers and that our economy is in the midst of a severe recession.[21] The day-to-day livelihood, health and the security of our people depend upon the continuing ability of our domestic industries to compete successfully with foreign producers. This reality leads me to conclude that proponents of funding a "Tier One" system through increases in the current Superfund Act tax on specific American industries should have the heavy burden of proving that its incidence would not impede the ability of our domestic producers to compete with foreign producers in our own and foreign markets. If the ultimate result of this Group's proposals and other efforts to internalize the social costs of activities that produce hazardous wastes is to impair substantially that ability of our domestic industries to compete with foreign producers, then not only would these efforts at internalization fail, but also other direct and indirect external social costs would be visited on other citizens.[22] Those external costs could substantially exceed the external costs now being borne by others because of hazardous wastes disposal.

In summary, we must be careful in righting wrongs flowing from incomplete internalization of the social costs involved in the generation and disposal of hazardous wastes not to go overboard and impose a whole new set of non-internalized social costs -- loss of trade, unemployment, the disappearance of useful products -- that are equally capriciously and unfairly imposed on other segments of our society. Two wrongs can not make a right.

E. Statutory Presumptions. -- While I join in the Report's recommendation for a system to create "Toxic Substance Documents", I cannot support the particular statutory presumptions recommended.[23] Good presumptions can play a useful role in a Tier One system, just as good presumptions are an important part of the existing common law. But the statutory presumptions proposed here are not good presumptions.

The principal purpose of presumptions in the first tier ought to be to facilitate expedited payments to "qualified", or "worthy", recipients. They should be persons who have been injured primarily because of the hazardous wastes. Two secondary purposes should be to ease the burden on the administrators of the fund and to hold down overall transactional costs.

However worthy these three objectives, presumptions should be employed only where they are a valid reflection (a shorthand summary) of what is generally true. Since absolute truth is elusive in the areas we have considered, we should settle for the second best -- the prevailing views of the medical and scientific experts. But that is far better than the third best -- legislative fiats that reflect policy biases as to who should win rather than what is most likely to be objectively determined truth. One of the major problems with the three recently repealed Black Lung Act statutory presumptions was that they did not meet this criterion of truth, and they well nigh wrecked that program.[24] Throughout the Study Group's deliberations Judge Breitel continued to remind us that in the common law the strengths of presumptions vary, and they vary directly in proportion to the reliability of their perceived nexus to the truth.[25]

Diseases such as cancers may have multiple causes. If the Group's two statutory presumptions are intended to make exposure to hazardous wastes the principal legal cause of such injuries and thus to lessen the importance of evidence of other causes, they cannot pass muster for the broad array of hazardous materials and diseases envisioned in the proposal. While these presumptions may well be valid for the rare form of cancer that is closely correlated statistically to asbestos inhalation, the strength of that single causal linkage appears to be exceptional. Cancer may often be the result of multiple factors acting together: heredity, diet, radiation exposures, climate, as well as what we breathe, eat and touch. One of the major problems with the implicit single cause criterion in the now repealed Black Lung Act presumptions was that they ignored this reality. What is called for in formulating reasonable presumptions in these multiple cause areas is probability analysis.[26]

The farther a presumption departs from reality, the more arbitrary it becomes. And the more dubious presumptions that are built into a statutory scheme, the more unfair it becomes.[27] The Supreme Court once said:

> [R]es judicata renders white that which is black, and straight that which is crooked... No other evidence can afford strength to the presumption of truth it creates, and no argument can detract from its legal efficacy.[28]

That should not be said of any presumptions written into any statute enacted pursuant to this report's recommendations or subsequently adopted under the administrative scheme recommended.

Turning to the recommended Toxic Substance Documents, if they are the product of a rigorous rulemaking process where scientific and medical peer group review of supporting studies and their underlying data is possible, then they can substantially aid in expediting recoveries and reducing transactional costs. Thus, preparation of these Documents should be entrusted only to an impartial federal agency, as distinguished from a "mission oriented" agency. The agency should also have no connection with funding of the Tier One system. The best scientific and medical evidence available should be assembled and tested through fair procedures where all concerned could have access and opportunity to participate. This would require going beyond the present bare bones notice and comment provision of the current Administrative Procedure Act to the "hybrid type" procedures that Senate Bill S. 1080, which was passed on March 24, 1982 by 94 to 0 vote, would afford.[29]

Documents produced through such a hybrid rulemaking process would be roughly equivalent to a scientific or medical treatise or journal article. Compiling and sorting the complex evidence in a single, generic proceeding would obviate the need for repetitious marshalling of the same evidence in case by case processing of multiple claims.

There is precedent for such an effort to expedite reasoned decision making in the experience of the Nuclear Regulatory Commission with hybrid rulemaking in dealing with complex generic issues. In the early 1970's the licensing of nuclear powerplants came to a literal standstill because generic health and safety issues under the Atomic Energy Act and generic National Environmental Policy Act issues were being adjudicated over and over again in individual plant licensing cases. The Commission finally broke the licensing impasse by removing each of these issues from those multiple forums and resolving it in a single generic rulemaking. Most commentators and courts applauded this process.[30]

Any discussion of presumptions must also take into account the reality that presumptions formulated for a Tier One system will eventually find their way by analogy into the Tier Two tort system. The Report recognizes that application of the proposed statutory presumptions would be grossly unfair if applied in Tier Two and seeks to avert this result by declaring that the "carryover" should not occur.[31] Such declarations are, however, likely to prove as ineffective as King Canute's order to the tide not to rise. In our Group discussions, Judge Breitel pointed out that legislative determinations are a source of common law principles. They will continue to be so however we opine. I believe that the better remedy to the perceived danger of abuses in Tier Two lies rather in greater restraint in the formulation of the presumptions for Tier One. If there were no statutory presumptions for Tier One and the only presumptions that were formulated administratively were factually sound ones developed through the deliberative process discussed above, it would be difficult to justify their rejection on either tier. There is little social merit in requiring the same factual matters to be relitigated time and time again.

F. Strict Liability. -- Judge Breitel in his comments points out that the analyses of "strict liability" adopted in the Report are flawed.[32] The Report's view is at the outer fringes, rather than in the mainstream, of current thinking on this aspect of the common law both in the courts and academia.[33] I disassociate myself from this aspect of the Report and instead concur in Judge Breitel's views.

G. Retroactivity. -- One topic that recurred again and again in our Group discussions was "retroactivity." Some of this discussion touched on the questions of Constitutionality, which an Appendix to the Report discusses,[34] but the bulk of it centered on questions of policy, which the Report does not discuss in sufficient detail.[35] This glossing over should not obscure one of the Study Group's most important decisions: the recommendation that subrogation for claims paid out of the Tier One system not apply to wastes disposed of prior to the enactment of any implementing legislation. Since I was one of the principal opponents of retroactivity, I believe it important to spell out the policy reasons for our opting against it.

Our discussion of retroactivity centered on the currently active hazardous waste disposal facilities. We decided to recommend imposition of liability for injuries or damages which were unforeseeable only on a prospective basis. Thus, the operator of an existing facility would have the option of staying in business under the new rule or closing it down. Concerns in the insurance industry, where "claims made" and "occurrences" policies still apply for differing sites, might also be lessened. As to past acts, the negligent operator would continue to be liable to the victim (or to those who compensated him) under common law principles, but the risk of unforeseeable injuries would rest on the Fund and not the operator.

In deciding against retroactive application of a "strict liability" subrogation claim, the Study Group looked to the same equitable principles which underlie the constitutional prohibition against _ex post facto_ laws, due process and the general rule of construction that a statute should only be given prospective application.[36] We also recognized that sporadic imposition of strict liability on a retroactive basis poses potentially serious impediments to the long term availability of adequate insurance coverage at reasonable rates.[37]

H. _Election of Remedies_. -- On this issue, I join in the Anderson, Breitel, _et al_, statement and dissent from the Report's recommendation.[38]

I was one of the five members of the Group who voted to require a "binding" election between pursuing Tier One and Tier Two remedies. I understood that such a requirement would also have included a limited "safety valve" to avoid substantially unjust or unconscionable results. The proposal in the preceding joint separate statement, which was advanced after our final meeting in Boston on June 28, is an elaboration of that concept.

A limitation on election is needed to make a two tier system work. Relaxation of tort standards posed by (1) the statutory presumptions recommended in Tier One and (2) the Report's extreme views of strict liability if applied in Tier Two, might result in claims in both Tiers that would make predictability of economic risk impossible. Such predictability is needed by industry and insurers. Without that predictability the system would become increasingly costly and economically inefficient. It is also possible that insurance could become unavailable.

Thus, in setting any compensation schedules for Tier One, considerable care should be taken in setting ceilings on specified awards. The amounts of compensation available might have to be limited in rough relationship to the weakening of the causal connection resulting from adoption of the recommended statutory presumptions.

Concern over predictability also leads me to caution that great care should be taken in fashioning schedules for "the psychological, social and related injuries sustained ... geared to tangible events objectively identified as physical and neurological consequences of physical injuries." What is intended is to provide for schedules for specified physical injuries somewhat similar to those available in first party accidental injury policies. The underlined words have been carefully chosen to preclude payments for what is essentially the subjective component in "pain and suffering" awards. That component in its more exaggerated form becomes "punitive" or "exemplary" damages. But whatever it is called, the vengeance concept has no place in a Tier One system.[39]

I. Punitive Damages -- I also believe that punitive or exemplary damages have no socially desirable role in Tier Two when a comprehensive scheme of regulation such as RCRA, encompassing civil and criminal sanctions, is in place. I regret that my colleagues who were divided over this issue decided not to address it one way or the other in the Report. For my part, I believe that where Congress has exercised its commerce power to impose a comprehensive system of regulation over an industrial activity or practice and elects to leave private remedies to State law, it should nevertheless preempt any State punitive and exemplary damages since in essence they duplicate the criminal and civil sanctions provided in the

Federal statute.[40] Vigilantes have no place when the sheriff takes over. In my view, that duplication also constitutes an unreasonable burden on interstate commerce since it may furnish a major deterrent to engaging in worthwhile economic activity. A third reason is that unless class actions are to be required, permitting punitive damages to be imposed on activities regulated under RCRA might result in overcompensation of a few claimants and their lawyers to the detriment of many equally worthy claimants.[41]

3. Federal "Common Law" and Federal Implied Rights of Action

The Study Group received an inquiry from Senators Stafford and Randolph concerning the effect of two recent Supreme Court decisions, the Milwaukee and Sea Clammers cases on Federal common law in this area.[42] I agree with the conclusions in the Report that Federal common law no longer exists and when existent probably did not afford private parties, as distinguished from States, a right of action in the Federal courts.[43] In addition, I do not believe that Congress can constitutionally create or recreate a private right of action in common law through a "savings clause".[44] Congressional modifications of savings clauses in regulatory statutes, such as those recently considered in connection with S. 1716 and H.R. 6307,[45] would not change the substantive result in Sea Clammers or United States v. Price.[46] They would only serve to produce unnecessary confusion and litigation. It is also clear that the views expressed in one Congress about a prior Congress' intent (e.g., suggesting the Supreme Court's "misinterpretation" of that intent) are entitled to little weight because of the abuses apparent in post-hoc legislative history.[47]

4. Reexamination of the Current Tort System

Concern over social costs and their incidence leads me to emphasize the importance of the general call of the Study Group and Judge Breitel for a reexamination of certain fundamentals of our current tort system.[48] The thoughtful paper submitted to us by Richard Schmalz, which is summarized extensively in Part III-B of the Report, contains specific suggestions on how liability might be "channeled" in generating, transporting and disposing of hazardous wastes, following precedents in the nuclear field both in this country and in Western Europe.[49] His suggestions merit serious consideration and may prove to be one of the most important contributions to current thinking in this general area stimulated by our Study.

Serious questions exist as to whether our present tort system is operating at optimal efficiency, particularly where it requires duplicative insurance against virtually unlimited damages, coupled with ever increasing risks of liability based only on the most tenuous connection with the event actually causing injury.[50] Are looser and looser definitions of "strict liability" in the public interest?[51] Are efforts to extend the concept of "joint and several" liability to allocate costs to the "innocent" as well as the "guilty" in the public interest?[52] Are there fairer, more efficient, less costly alternatives for compensating persons for personal injury and property damage?

These fundamental questions as to the Tier Two tort system, which our recommendations would leave substantially intact and little changed, need to be raised and answered with regard to compensation for injuries and damages from hazardous wastes and the numerous other fields of tort law that are now in controversy.[53]

NOTES

1. Although I was one of the three members of the Study Group named by William Reece Smith, then President of the American Bar Association, I have participated in the work of the Group as an individual member of the bar and not as a representative of that association. I also wish to acknowledge the assistance given me by my associate, Alfred Light, and my research assistant, Karen Donegan, during this Study.

2. Like Judge Breitel, I do not vouch for any of the research papers that appear in the appendices. Some were furnished to us in the course of our deliberations, others only in the last few days of our efforts. Thus, I was able only to review drafts of several of them, which I commented on in letters which appear in the "Comments to the Appendices."

3. The compromise eliminated both a federal private cause of action and joint and several liability; added a third-party defense; eliminated all third-party compensation; and established a limit on compensation for each incident of damage to natural resources. 126 CONG. REC. S14,967-68 (daily ed. Nov. 24, 1980) (remarks of Sen. Stafford); _id_. at S15,004 (remarks of Sen. Helms); Grad, TREATISE ON ENVIRONMENTAL LAW §§ 4A.01(1)(f), 4A.05 at 4A-164); Report at 38; _see_ 126 CONG. REC. S15,002 (daily ed. Nov. 24, 1980) (compromise superfund does not provide out-of-pocket medical expenses for individuals) (remarks of Sen. Williams); _id_. at S14,967 (compromise superfund eliminates virtually all third-party compensation, including payment of medical expenses to victims of waste releases) (remarks of Sen. Stafford); 38 CONG.Q.WEEKLY REP. 3435 (Nov. 29, 1980) (deletion of medical expenses "biggest concession" in compromise bill); _cf_. S.1480, 96th Cong., 2d Sess. (1980) (original Senate bill calling for strict liability private cause of action); S.Rep. 96-848, 96th Cong., 2d Sess. (1980); S.1486, 97th Cong., 1st Sess. (1981) (attempt to amend Superfund Act to include private cause of action previously rejected). The proposed provisions in S.1480 reflected some, but not all, of the provisions along the same lines in other bills in that and several other Congresses. _E.g_., S.1483, 97th Cong., 1st Sess. (1981) (radiation exposure); H.R. 85,

97th Cong., 1st Sess. (1981) (oil spill damage); S.681, 97th Cong., 1st Sess. (1981) (oil spill damage). The Report explains the Study Group's rationale for limiting the study at pages 26-27.

4. See, e.g., S.Rep. 96-848, 96th Cong., 1st Sess. 117-118 (1981) ("The [proposed Federal tort] system of liability . . . is unique and bizarre . . . The problems in such areas of civil procedure as res judicata, collateral estoppel, conflict of laws, and bar and merger have been wholly overlooked . . . [T]his federal alternative available as a partial remedy will seriously retard the development of the common law . . . [T]here has been very little demonstration made in the record as to the financial ability of the victim compensation fund to address the claims which will be honored . . . [T]he fee system is seriously deficient and inequitable.") (minority views of Sen. Simpson); Id., at 119-122 ("S.1480 changes State tort law . . . [and] constitutes an intrusion into judicial processes . . . upon which industries and businesses have relied in assessing their exposure to liability and the availability of insurance . . . The definition of 'hazardous substance' is exceedingly broad . . . [A defendant] would find himself facing a barrage of suits in which he was being held strictly liable for all of the damages regardless of whether or not he had any control over the situation . . . [The bill] does not provide for apportionment in the case where a significant contributor who, for example, was responsible for 60% of damages must bear the full 100% of the costs because the other contributors cannot be found or identified or are found to be insolvent . . . The issue of applying the new standards retroactively remains a troubling one . . . [Subrogation would] shift the balance of litigation . . . [and the law would no longer represent] the drawing of an equitable balance between private litigants . . . . Consequently, it would appear that private sector decisions [would] have to be made [on basis of the worst case]: (1) the defendant faces litigation brought by the Federal government [by subrogation of private claims]; (2) he is one of a few or the single defendant in a case where the release was largely caused by another operator; (3) the more significant contributor is insolvent; (4) actions beyond his reasonable control caused the release; and (5) joint and several liability under S.1480 expose the defendant to the possibility of paying all the damages.") (minority views of Senators Domenici, Bentsen and Baker).

5. This rejection also took into consideration but rejected the arguments advanced in current literature which called for such a remedy both before and after passage of CERCLA. E.g., Meyer, Compensating Hazardous Waste Victims: RCRA Insurance Regulations and a Not So "Super" Fund Act, 11 ENVIR.L. 689, 719 (1981); Sobel, A Proposal for the Administrative Compensation of Victims of Toxic Substance Pollution: A Model Act, 14 HARV.J.LEGIS. 683 (1977) (similar to Brodhead bill). Note, Inactive or Abandoned Hazardous Waste Disposal Sites: Coping with a Costly Past, 53 S.CAL.L.REV. 1709, 1745 (1980). The Study Group explicitly considered the S.1480 and Brodhead bill proposals and declined to recommend them. E.g., Report, at 215-218, 228-229, 238-239.

6. Younger v. Harris, 401 U.S. 37, 44-45 (1971) (Black, J.) ("[Continued adherence to the principle of Federalism encompasses] a notion of 'comity,' that is, a proper respect for state functions, a recognition of the fact that the entire country is made up of a Union of separate state governments, and a continuance of the belief that the National Government will fare best if the States and their institutions are left free to perform their separate functions in their separate ways. This, perhaps for lack of a better and clearer way to describe it, is referred to by many as "Our Federalism" and one familiar with the profound debates that ushered our Federal Constitution into existence is bound to respect those who remain loyal to the ideals and dreams of "our Federalism." The concept does not mean blind deference to "States' Rights" any more than it means centralization of control over every important issue in our National Government and its courts. The Framers rejected both these courses. What the concept does represent is a system in which there is sensitivity to the legitimate interests of both State and National Governments, and in which the National Government, anxious though it may be to vindicate and protect federal rights and federal interests, always endeavors to do so in ways that will not unduly interfere with the legitimate activities of the States."); see also Friendly, Federalism: A Forward, 86 YALE L.J. 1019 (1977). The Study Group discussed the possibility and potential unconstitutionality of mandating State implementation and administration of the proposed Tier One compensation system. But we noted that the Supreme Court "never has sanctioned explicitly a federal command to the States to promulgate and enforce laws and regulations." Federal

Energy Regulatory Commission v. Mississippi, No. 80-1749 (Jun. 1, 1982), slip op., at 18. The Group opted instead for a "cooperative federalism" or partnership role between the two levels of government based on the model in the Federal Water Pollution Control Act, rather than a hierarchical model "antithetical to the values of federalism and inconsistent with our constitutional history." FERC v. Mississippi, supra, (O'Connor concurring and dissenting), slip op., at 1. The national government should not be able "to force state governments to administer unpopular programs, thus transferring political liability for those programs to the States." FERC v. Mississippi, supra (O'Connor), slip op., at 14n.19, citing Advisory Commission on Intergovernmental Relations, THE FEDERAL ROLE IN THE FEDERAL SYSTEM: THE DYNAMICS OF GROWTH, HEARING ON THE FEDERAL ROLE, p. 32 (October 1980) (statement of Daniel J. Elazar). cf. S.Rep. No. 97-151, 97th Cong., 1st Sess. 52 (1981) ("a policy . . . implicit in the institution of federalism created by the Constitution.").

7. CAL.HEALTH & SAFETY CODE, §§ 25370- 25382 (West 1981); see Report, at 66-67. I believe that an "orphan site" category includes (a) sites for which no solvent disposal site operator exists and (b) sites for which no other responsible party connected to the site should be held responsible. For example, landowners on whose property waste was disposed without their knowledge should not be responsible parties. See Report, at 244. Neither should present landowners who purchased property without reason to know the dangerous condition existing on the land. See Report, at 34-35.

8. N.Y. TIMES (Jun. 22, 1982), p. B.4. The state Superfund law New York enacted, however, does not provide for compensation of personal injuries. S. 10620 (July 2, 1982).

9. See Report, at 178-179.

10. These same factors were evident in the Reagan Administration's decision to promulgate compulsory financial responsibility requirements for licensed owners and operators of hazardous waste management facilities. 47 Fed. Reg. 16544, 16545 (Apr. 16, 1982) (to be codified at 40 C.F.R. Parts 123, 264 and 265). They also have been relevant in discussions at the International Institute for the Unification of Private Law (UNIDROIT) Committee of Governmental Experts, which

is preparing uniform rules for European nations relating to liability and compensation for damage caused during the carriage over land of hazardous substances.

11. Report, Part II; *see also* Grad letter to Assistant Attorney General Carol Dinkins, dated December 18, 1981, and Freeman letter to Chairman Zazzali, dated March 2, 1982 in the "Comments to the Appendices."

12. *See* Report, at 184. The Love Canal study released July 14, 1982 suggests that health problems related to that site may have been overstated. United States Environmental Protection Agency, ENVIRONMENTAL MONITORING AT LOVE CANAL, EPA-600/4-82-030a (May 1982). *See also* H.R.Rep. No. 96-IFC 31, 96th Cong., 1st Sess. 33 (1979) (concluding that early estimates of the number of waste sites were in error); Report, at 21n.19, 23n.34; one puzzling aspect of determining the extent of the abandoned waste site problem has been the suggestion that EPA is experiencing difficulty in finding sites appropriate for cleanup. *See EPA Expecting to Run Out of Sites to Clean Up, Expands Eligibility*, 13 ENVIR. REP. (BNA) 195 (Jun. 18, 1982).

13. The potential for abuse of the Tier One System remains even if the system were to be funded out of general tax revenues. However this potential is greater in the "special fund" situation because the periodic scrutiny incident to the annual budget and appropriations process is less rigorous in the case of special funds. Recent experience with the Federal Black Lung Benefits program and the New Jersey Spill Compensation Fund furnish examples. *See* Lopatto, *Amendments Fight Excesses of Black Lung Statute*, LEGAL TIMES (Mar. 22, 1982); *NJ Auditors Question Spill Fund Management Controls*, HAZARDOUS WASTE LIT. REP. 2,444 (May 18, 1982).

"Superfund" itself is controversial because funds have *not* been advanced to clean up abandoned hazardous waste dumps as expeditiously as Congress apparently intended. It has been charged that this delay has been attributable, in part, to EPA and the Justice Department's preoccupation with pursuing potentially responsible parties. *See* Baise & Bourdeau, *EPA's Implementation of the Superfund Response Program*, 3 ENVIR. ANALYST 3 (May 1982); *Administrative Delays Plague Cleanup Under Superfund, Indiana Congressman Says*, 13 ENVIR. REP. (BNA) 167 (Jun. 11, 1982); *cf.* 47

Fed. Reg. 20664, 20666 (May 13, 1982) (guidelines for using the imminent hazard, enforcement and emergency response authorities of Superfund and other statutes); EPA Guidance Memorandum on Establishing National Priorities List Under Superfund (Dated June 28, 1982), 13 ENVIR.REP. (BNA) 339, 341 (Jul. 2, 1982) ("EPA will consider Fund financed cleanup of [mining] sites only after all available enforcement efforts fail.").

Robert Hershey has reported more generally on rising criticism of the Federal Government's many insurance programs, which even without counting social security or unemployment insurance now cover more than $2,000 billion in risks. He quoted former OMB official Robert G. Penner, now at the American Enterprise Institute, as saying, "The real problem is the lack of careful scrutiny of these things." Hershey, U.S. Insurance: Critics Grow 131 N.Y. TIMES (Jun. 8, 1982), at 1, col. 2; 6, col. 1.

14. One major subcategory of administrative costs virtually overlooked in the Study Group's deliberations (see Report, at 231) are intergovernmental costs, the costs of assessing each State's prospective need for Tier One funds from the Federal Government and the timely periodic transfer of funds between the two levels of government. Because of (1) the proposed relaxation of liability (or "eligibility") requirements through the recommended statutory presumptions in Tier One, (2) the interpretation of "strict liability" advanced by the Report for Tier Two, and (3) because of the generous benefit levels recommended, the potential for the kind of "tragedy of the commons" which the social services block grant program (Title XX of the Social Security Act) experienced in the seventies exists. Derthick, UNCONTROLLABLE SPENDING FOR SOCIAL SERVICES (1977); Hardin, The Tragedy of the Commons, 162 SCIENCE 1243 (1968). This "tragedy" is that each State obviously has an incentive for maximizing its share of the funds, and in the absence of identifiable limiting principles on the group of eligible claimants and the consequent ability of the federal government to estimate need on a rough actuarial basis, the system's overall costs could well soar notwithstanding a modest need for the system to compensate injuries "actually" caused by hazardous wastes.

15. See Report, at 161, 230-232.

16. See Report, at 7, 10-11.

17. See Report, at 8-17; 24n.47.

18. See Leape, Quantitative Risk Assessment in Regulation of Environmental Carcinogens, 4 HARV.ENVIR.L.REV. 86, 107 (1980); Ricci and Molton, Risk and Benefit in Environmental Law, 214 SCIENCE 1096, 1099-1100 (1981).

19. The direct costs of the Tier One system would be substantially higher because the Group would allow recourse to the Tier One Fund at inactive waste dumps, even though a solvent responsible party is known, as well as at "orphan" sites. This contrasts with the Black Lung Act's compensation of miners only "when there is no responsible mine operator available to provide payments, when there is operator default and when the coal miner's last employment was before January 1, 1970." Baram, ALTERNATIVES TO REGULATION 216 (1982). I would limit compensation from the Fund at inactive sites to "orphan sites" as California did in its recently established state Superfund law. CAL. HEALTH & SAFETY CODE §§ 25370-25382 (West 1981). See also Report, at 66, 267n.94.

20. Claims under the Black Lung Benefits Act have exceeded substantially earlier estimated costs. See U.S. DEPARTMENT OF LABOR BRIEFING PACKAGE ON BLACK LUNG LEGISLATIVE PROPOSAL (1981). For example, in 1977, benefit outlays for 1978-81 were estimated to be $1,121,100,000. H.Rep. No. 95-151, 95th Cong., 2d.Sess. 27 (1978), reprinted in [1978] U.S. CODE CONG. & AD. NEWS 263. Actual expenditures proved to be $2,178,400,000 (a $1,057,300,000 difference.) 127 Cong. Rec. S. 15480 (Dec. 16, 1981). Black Lung benefit expenditures since 1969 stand at over $9 billion. HEARINGS BEFORE THE SUBCOMMITTEE ON OVERSIGHT OF THE COMMITTEE ON WAYS AND MEANS, HOUSE OF REPRESENTATIVES, 97th Cong., 1st Sess. 3 (1981) (Henig, Morton E.).

21. The timing of governmentally mandated expansions of industry costs could well be crucial to the prospect that the additional costs could be absorbed or passed on to consumers and thus internalized. Even where foreign competition is not a significant factor in the U.S. market, internalization is much less likely to occur when the economy is in a recession or depression. See Calabresi, Some Thoughts on Risk Distribution and the Law of Torts, 70 YALE L.J. 499, 520 (1961).

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22. We should profit from our experience in other areas of environmental law. In some areas, such as automobile emissions controls under the Clean Air Act, we have been successful in internalizing pollution costs in the American submarket for automobiles because all cars sold within this country must meet the same emissions standard wherever they are manufactured. But efforts at internalization of pollution control costs have largely failed in U.S. submarkets such as steel, where foreign producers are not required to incur equivalent control costs. Tariffs are one means for offsetting otherwise discriminatory costs on our own industries, but they run counter to other national priorities. Even if tariffs were imposed for this purpose, they could provoke similar barriers to sale of American goods abroad. There are potential international forums for resolving these "internalization" dilemmas through negotiation. See Legal Committee Completes Draft Covering Hazardous Substances Liability, 5 INT'L ENVIR.REP. 182 (May 12, 1982) (United Nations Intergovernmental Maritime Consultative Organization); OECD Waste Management Policy Group Plans Work on Export of Hazardous Waste, 5 INT'L ENVIR.REP. 183 (May 12, 1982) (Organization for Economic Cooperation and Development). But as yet they are ineffective. A recent OECD report presented at the May 1982 Nairobi meeting on the global environment warned developing countries about the environmental aspects of their planned activities. "These countries are aiming at higher than average growth rates, their environmental machinery is incomplete, the backlog of pollution is large, and consequently the pressure on their relatively fragile environment is already severe." Nairobi Meeting on Global Environment Looks at Progress Made in Past 10 Years, 5 INT'L ENVIR.REP. 175 (May 12, 1982) (statement of James MacNeil, Director of OECD's Environment Directorate).

23. See Freeman letter to Grad, dated Feb. 19, 1982, in "Comments to the Appendices." In addition to believing that the recommended statutory presumptions in Recommendation Four [Report, at 198-199] are not sound policy here, I find their wording confusing. They represent a drastic modification of presumptions initially suggested by the Reporter [Appendix M, p. 314] which were rejected by the Group.

The Study Group modified the Reporter's suggested presumptions in two major ways. First, recognizing that diseases associated with hazardous waste exposure also may be associated with other causes, the Study Group substituted the words "contributed to" for "caused" in presumption (a) and voted to delete the word "solely" from presumption (b). Second, the Group decided to delete all references to a "person against whom a claim is made" in the statement of the presumptions and the showing which triggers them because it wished to eliminate the necessity for the claimant to identify a potential subrogee once he had identified the source of his exposure (i.e., the waste site or incident).

The presumptions as modified do not resolve the question of how strong a causal connection there should be between an industrial activity and an injury before the loss should be shifted to the Fund. Nor do they preclude the possibility that (a) the amount of a compensation award would be scaled in relation to the strength of the causal connection or (b) reduced if other contributory causes of the disease were present.

What do the modified presumptions actually accomplish? To benefit from either presumption, the claimant must prove by a preponderance of the evidence (1) the existence of a source which at the time of exposure was part of the hazardous waste system, (2) exposure to such hazardous waste, and (3) that the claimant suffered injury of the kind that is known to result from such exposure. Having made these showings, the first presumption that arises is that the waste contributed to his injury. Thus, the claimant is entitled to at least nominal damages unless the Fund rebuts the presumption, so long as the other eligibility criteria have been satisfied (e.g., a public collateral source has not compensated the claimant). The second presumption is more confusing. It states that the waste was responsible for the exposure and the resulting injury. The only reasonable explanation of this second presumption apparent in light of the modifications made to the earlier presumption drafts and the reasons for those modifications is that the Study Group wishes to place the burden of proof with respect to any contributory negligence defense the Fund might have on the Fund rather than the claimant. That is, as between the claimant and the Fund, the Fund bears the burden of proving that the claimant was responsible for the exposure and its consequences.

The Reporter cites the Workers' Compensation and Black Lung disease presumptions of compensability in his discussion of the Fourth Recommendation, indicating that they "serve the purpose of ruling out claimant's own physical weakness or habits as a contributory factor." [Report, at 203] This interpretation is, however, contrary to my reading of the presumptions and the meaning of the modifications made in them by the Study Group. In the Workers' Compensation and Black Lung situations, there are at least identifiable limited target populations, *i.e.*, employees or coal miners, although the Black Lung program has experienced considerable controversy over the revised statutory definition of "miner" which grew out of the 1972 and 1977 amendments to the Black Lung Act. Baram, ALTERNATIVES TO REGULATION 219 (1982) ("[Hazardous waste effects] are not effects that are confined to a narrow constituency like employees in a work place."); BLACK LUNG BENEFITS AND REVENUE AMENDMENTS OF 1981: HEARINGS ON S.1922 BEFORE THE SUBCOMM. ON LABOR OF THE COMM. OF LABOR & HUMAN RESOURCES, 97th Cong., 1st Sess. 119, 128-131 (1981) (statement of Frederick W. Webber). While it may be appropriate for employers to take care of employees who contract diseases which are sometimes but not always work-related, it is not appropriate to expect industry to provide such a service to non-employees. *See* *Diet, Alcohol, not Chemicals, Cited as Major Factors in Cancer Development*, 6 CHEM. REG. REP. (BNA) (Jun. 18, 1982); National Research Council, DIET, NUTRITION, AND CANCER (1982).

24. *See* Comptroller General of the United States, LEGISLATION ALLOWS BLACK LUNG BENEFITS TO BE AWARDED WITHOUT ADEQUATE EVIDENCE OF DISABILITY, HRD-80-81 (Jul. 29, 1981). In 1981, Congress repealed some of these presumptions, in a reflection of widespread dissatisfaction with the program. *See* 127 Cong. Rec. H. 9600-H. 9606 (Dec. 15, 1981); 127 Cong. Rec. S. 15474-S. 15498 (Dec. 16, 1981); 127 Cong. Rec. H. 9788-H. 9798 (Dec. 16, 1981); *see* Appendix to this statement.

25. He does so again in his Comments. *See* Breitel, at 6.

26. *Cf.* EPA's Proposed National Emission Standards for Hazardous Air Pollutants; Policy and Procedures for Identifying, Assessing, and Regulating Airborne Substances Posing a Risk of Cancer, 44 Fed. Reg. 58642 (Oct. 10, 1979); and Comments of the Utility Air Regulatory Group on the Proposed Regulations dated Feb.

21, 1981, in EPA Docket No. OAQPS-79-14. See also Rizzo & Arnold, Causal Apportionment in the Law of Torts: An Economic Theory 80 COLUM.L.REV. 1399, 1426 (1980) ("[C]ourts [are] becom[ing] increasingly aware of the merits of apportioning damages in tort . . . [and should be encouraged] to cast off their traditional reluctance to apportion damages among joint tortfeasors.").

27. See, Breitel, at 6; see also Note, Allocating the Costs of Hazardous Wastes Disposal, 94 HARV.L.REV. 584, 600 (1981) ("Alternatively, a rebuttable presumption of causation could be created in favor of plaintiffs in selected circumstances, with the result that responsible firms of the entire industry would be liable for costs greatly in excess of the demonstrated costs of the wastes. Such a system would be erratically punitive.").

Note that this multiple causation problem would not go away even if one were to eliminate subrogation and the retroactive aspects of a compensation plan completely. Non-subrogation simply shifts the ultimate incidence of a claim from an individual subrogee company to the taxpaying industries collectively. To the extent the taxpaying industries, even collectively, pay costs largely attributable to other causes of disease (e.g., the claimant's own habits, or his exposures to hazardous substances generated by non-taxpaying industries), the system distorts the marketplace for hazardous waste services and in effect creates a forced waste industry subsidy of other parts of society. See generally Stone, REGULATION AND ITS ALTERNATIVES 91-123 (1982); Klemme, The Enterprise Liability Theory of Torts, 47 U.COLO.L.REV. 153, 156-165 (1976). If the Tier One scheme through its presumptions and apportionment rules permits such distortions, then a special industry tax is completely inappropriate. The confusion evident in interpretation of what may be relatively innocuous presumptions in Recommendation Four confirms my view that both the funding and the presumptions recommendations are wrong. See note 23 supra.

28. Jeter v. Hewitt, 22 How. 345, 348, 63 U.S. 352 (1859).

29. See S.Rep. 97-284, 97th Cong., 1st Sess. (1981); cf. Admin. Conference of the United States, Recommendation 82-5, Federal Regulation of Cancer-Causing Chemicals (Jun. 18, 1981).

30. TO ESTABLISH A DEPARTMENT OF ENERGY AND NATURAL RESOURCES, ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION, AND A NUCLEAR SAFETY AND LICENSING COMMISSION: HEARINGS ON S.2135 AND S.2744 BEFORE THE SUBCOMM. ON REORGANIZATION, RESEARCH, AND INTERNATIONAL ORGANIZATIONS OF THE SENATE COMM. ON GOVERNMENT OPERATIONS, 93rd Cong., 2d Sess. 172, 195-211 (1974) (Statement of George Freeman); *see* Admin. Conference of the United States, Recommendation 82-5 (Jun. 18, 1982), at section V (generic rulemaking on cancer-causing chemicals); Gellhorn, *Public Participation in Administrative Proceedings*, 81 YALE L.J. 359 (1972); Comment, *Public Participation in Federal Administrative Proceedings*, 120 U.PA.L.REV. 702 (1972); Cramton, *A Comment on Trial-Type Hearings in Nuclear Power Plant Siting*, 58 VA.L.REV. 585 (1972); Cramton; *The Why, Where, and How of Broadened Public Participation in the Administrative Process*, 60 GEORGETOWN L.J. 525 (1972); Clagett, *Informal Action-Adjudication-Rulemaking: Some Recent Developments in Federal Administrative Law* 1971 DUKE L.J. 51 (1971); Murphy, *The National Environmental Policy Act and the Licensing Process: Environmentalist Magna Carta or Agency Coup de Grace?* 72 COLUM.L.REV. 963 (1972); Robinson, *The Making of Administrative Policy: Another Look at Rulemaking and Adjudication and Administrative Procedure Reform*, 118 U.PA.L.REV. 485 (1970).

31. Report, at 245, 248-250. Also, the Report is silent concerning whether the presumptions are to apply in the subrogation action. In my view, the proposed statutory presumptions should not since these particular presumptions are inappropriate in either Tier.

32. Breitel, at 4-5; *See* Freeman letter to Grad, dated March 10, 1982, in "Comments to the Appendices."

33. The Report's analysis [Report at 107-108] to the contrary notwithstanding, the New Jersey courts in *New Jersey* v. *Ventron Corp.* did not pronounce the sort of liability standard described in the Report for cleanup costs under the New Jersey Spill Control and Compensation Act. N.J.S.A. 58:10-23 *et seq*. (1977). The trial court noted in that case that "[i]n this case it was known by the liable defendants that mercury had dangerous potentialities." No. C-2996-75 (Super. Ct., Ch. Div. Bergen County, Aug. 22,1979), at 55; 1 CHEM & RADIATION LIT.REP., at 376. The appellate court in that case found that it could constitutionally apply the statute's liability standard retroactively because

the statute did not create a new "substantive liability." Instead, "[i]t was remedial only, providing a procedure for the imposition of costs to pay for the cleanup of prior wrongful discharges." 182 N.J. Super. 210 (App.Div. 1981) (emphasis added); see Report, at 150n.306. Furthermore, even when a statute appears to adopt an absolute liability standard making the defendant's knowledge or the objective foreseeability of an accident immaterial, foreseeability is still relevant on the issue of causation. The balancing of social costs and benefits of awarding compensation in a particular case at the expense of an industrial activity always takes place, at least implicitly, in a tort suit. Kuster, Toxic Substance Contamination: The Risk-Benefit Approach to Causation Analysis, 14 MICH.J.L.REFORM 53, 64-65 (1980) ("[P]olicy considerations are . . . manifest in courts' proximate cause determinations generally.").

34. Appendix L.

35. See Report at 161, 230-231, 234-235. In addition, I share Professor O'Connell's concern about the multiplicative number of proceedings arising out of the same incident. See also Professor O'Connell's separate statement. I would have substantially reduced the likelihood of repetitious proceedings by not only requiring in Tier One that notice be given to potential subrogees [Report at 231] but also by giving them a right, which is direct or indirect under most Workers' Compensation statutes, to participate in such proceedings.

36. U.S. Const., Art. I, § 9, cl. 3 (Congress forbidden to pass ex post facto laws); U.S. Const., Art. I, § 10, cl. 1 (state legislatures forbidden to pass ex post facto laws); the framers of the Constitution intended the clauses to apply to retroactive civil legislation as well as criminal legislation. See Crosskey, The Ex Post Facto and Contract Clauses in the Federal Convention: A Note on the Editorial Ingenuity of James Madison, 35 U.CHI.L.REV. 248 (1968); Field, Ex Post Facto in the Constitution, 20 MICH. L.REV. 315 (1922) but the clauses have been construed to apply per se only to criminal statutes. Calder v. Bull, 3 U.S. (3 Dall.) 386 (1798); the following state constitutional provisions prohibit all retroactive legislation: Colo. Const., Art. II, § 11; Ga. Const., Art. I, § 3(2); Idaho Const., Art. XI, § 12; Mo. Const., Art. I, § 13; N.H. Const., Art. I, § 23; Ohio Const., Art. II, § 28;

Tenn. Const., Art. I, § 20; Tex. Const., Art. I, § 16; cf. Murrill v. State Board of Accountancy, 97 Col. App.2d 709, 218 P.2d 569 (1950) (retroactivity violated due process clause); Gayle v. Edwards, 261 Ala. 84, 72 So.2d 848 (1954) (state constitutional violation found in failure to disclose in title of legislation its retroactive effect); SUTHERLAND, STATUTORY CONSTRUCTION, §§ 41.02 - 42.12; Lundquist v. Coddington Bros., Inc., 202 F.Supp. 19 (W.D. Wis. 1962) (statute may not apply retroactively to revive a cause of action already barred by the statute of limitations); Haase v. Sawieki, 20 Wis.2d 308, 121 N.W.2d 876 (1963) (statute attempting to reinstate cause of action objectionable); Massey v. Sullivan County, 464 S.W. 2d 548 (Tenn. 1971) (statute abolishing rule of no contribution for joint tortfeasors cannot be applied retroactively). A law will not be construed as retroactive unless the act clearly, by express language or necessary implication, indicates that the legislature intended a retroactive application. United States v. Whyel, 28 F.2d 30 (3d Cir. 1928); Crawford v. Worth, 447 F.2d 738 (5th cir. 1971); First Nat. Bank in Billings v. First Bank Stock Corp., 197 F.Supp. 417 (D.Mont. 1961); Elliot v. Volpe, 328 F.Supp. 831 (D.Mass. 1971); Douglas Aircraft Co. v. Cranston, 58 Cal.2d 462, 24 Cal.Rptr. 851, 374 P.2d 819 (1962) ("a statute should be given the least retroactive effect that its language reasonably permits."); Mau v. Superior Court, etc., 101 Cal.App.3d 875, 881; 161 Cal.Rptr. 895, 898 (1980) (unfairness of retroactive application to insurers who relied on the previous law in setting premium rates).

Prospective only application of "strict liability" reflected a compromise between those Study Group members who advocated an "industry standard of care" standard for subrogation claims and those who advocated retroactive "strict liability." While the problem of parsing out injuries resulting from past disposal and injuries resulting from post-enactment disposal is difficult, those same difficulties exist under present law (e.g. in determining when an accident occurs for purposes of insurance policy coverage).

37. See Report, at 161; Freeman letter to Superfund 301(e) Study Group, dated April 12, 1982, in "Comments to the Appendices;" U.S. Department of the Treasury, HAZARDOUS SUBSTANCE LIABILITY INSURANCE 81 (Mar. 1982).

38. See Separate Statement of Messrs. Anderson, Breitel, Freeman and O'Connell. See also comments on the Report by Messrs. Anderson, Breitel, Lundquist, O'Connell and Spannaus.

39. Strict liability, apportionment and damage issues are inextricably intertwined, as the Report sometimes fails to emphasize. For example, both the alternative liability and market share theories have been applied or considered only in cases involving negligent defendants. Cf. Report, at 49. Coupling either with recovery based on a theory of strict liability would go beyond current case law. Justice Traynor has recognized that strict liability situations are different. Limitations on damages, for example the exclusion of pain and suffering, are appropriate to prevent unfairness when liability is permitted without proof of fault. See Seffert v. Los Angeles Transit Lines, 56 Cal. 2d. 498, 511; 364 P.2d 337, 345; 15 Cal.Rptr. 161, 169 (1961) (Traynor, J. dissenting); and see O'Connell & Simon, PAYMENT FOR PAIN AND SUFFERING: WHO WANTS WHAT, WHEN AND WHY (1972); Levy & Ursin, Tort Law in California: At the Crossroads, 67 CALIF.L.REV. 497, 520-530 (1979).

40. Cf. Duke Power Co. v. Carolina Environmental Study Group, Inc. 438 U.S. 59, 84-94 (1977) (upholding Price-Anderson Act); Silkwood v. Kerr-McGee Corp., 667 F.2d 908, 922-923 (10th Cir. 1982) ("[P]unitive damages are 'awarded' against a person to punish him for his outrageous conduct and to deter him and others like him from similar conduct in the future.' Restatement (Second) of Torts § 908(1)(1979). See also City of Newport v. Fact Concerts, Inc., 453 U.S. 247, 266 (1981). . . [Thus where Congress has preempted the field of regulation of the nuclear industry, we are required] to hold invalid any state action that competes substantially with AEC (NRC) in its regulation of radiation hazards associated with plants handling nuclear material. A judicial award of exemplary damages under state law as punishment for bad practices involving exposure to radiation is no less intrusive than direct legislative acts of the state. Thus, we hold that punitive damages may not be awarded in this case.")

The intrusiveness of State punitive damages on the federal scheme of regulation is heightened where the Federal government requires the licensed persons to meet specified financial responsibility requirements, directly or through insurance. e.g. 42 U.S.C. § 6924(6) (1976) (RCRA); 42 U.S.C. § 9608 (1980) (CERCLA). Coverage against punitive damages is usually excluded from comprehensive general liability policies since as the Ninth Circuit recently noted "no rule of law limits the amount of punitive damages a jury may award." In re: Northern District of California "Dalkon Shield" IUD Products Liability Litigation No. 81-4648 et al, slip op. (Jun. 18, 1982). And intrusiveness into an intended uniform Federal scheme of regulation is compounded by the wide variations existing among the states as to when punitive damages may or may not be imposed. "[T]he 50 jurisdictions in which these [Dalkon Shield] cases arise do not apply the same punitive damages standards. Punitive damages standards can range from gross negligence to reckless disregard to various levels of willfullness and wantonness. Some states, in fact, do not allow punitive damages at all." Id.

Permitting punitive damages to be awarded in state tort actions for the same actions that are punishable by federal criminal and civil sanctions constitutes a form of double jeopardy -- multiple punishment for the same offense. While this multiple punishment does not violate the letter of the Double Jeopardy Clause of our Constitution, it is alien to its spirit.

41. See e.g. In re Northern District of California "Dalkon Shield" IUD Products Liability Litigation, 521 F.Supp. 1188, 1193 (1981), where the district court ordered certification of a nationwide class of all claims for punitive damages under FRCP 23(b)(1)(B) on two grounds. One was that:

> "It is clear that the amount of punitive damages sought far exceeds the available net worth of the company. This fact poses two very real threats if actions on this issue continue on an individual basis: 1) The company will be unable to respond to claims for punitive damages due to actual or constructive bankruptcy; or 2) At some point in the future, courts could rule that the aggregate sum alredy assessed against the defendant company in punitive damages was such that as a matter of law the company had been sufficiently punished and therefore punitive damage claims would be dismissed as a matter of law." 521 F.Supp. at 1193.

The Ninth Circuit Court of Appeals reversed on this point because:

> "The district court certified the 'limited fund' punitive damage class before requesting or receiving any evidence of Robins' net worth,

> earnings or available insurance coverage. After he ordered certification, the judge received Robins' attorney's affidavit showing the total claims against Robins and Robins' fund of assets but did not reopen discovery to permit plaintiffs to challenge these affidavits." No. 81-4648, *slip op*.

For a summary of the reasons for this overdeterrent effect, *see*, *e.g*., Parnell, *Manufacturers of Toxic Substances: Tort Liability and Punitive Damages*, 17 FORUM 947, 965-967 (1982) ("Punitive damages, when considered in the setting of multiplaintiff litigation, are counterproductive. . .").

42. *See* letter from Senator Jennings Randolph and Senator Robert T. Stafford to Zazzali, dated April 29, 1982, in "Comments to the Appendices." City of Milwaukee v. Illinois, 451 U.S. 304 (1981); Middlesex County Sewerage Authority v. National Sea Clammers Association, 453 U.S. 1 (1981).

43. Report, at 70-75 and Appendix F. *See* Freeman letter to Grad dated December 16, 1981, and Freeman letter to Superfund 301(e) Study dated May 17, 1982 [with enclosure] in "Comments to the Appendices." *See* also Grad, TREATISE ON ENVIRONMENTAL LAW § 4A.05 at 4A-173 (Jun. 1982) ("[T]here is clearly no private right of action left under the federal common law of nuisance.") Even prior to 1981, when the Supreme Court made the matter only of academic interest, it was generally recognized that federal common law was "apparently confined to use by governmental entities . . ." Department of Justice, Land and Natural Resources Division, THE SUPERFUND CONCEPT: REPORT OF THE INTERAGENCY TASK FORCE ON COMPENSATION AND LIABILITY FOR RELEASES OF HAZARDOUS SUBSTANCES 16-17 (June 1979). The now defunct doctrine of the federal common law of tort or nuisance was predicated on concepts of State sovereignty and federalism, rather than individual rights, and therefore had no application to nongovernmental plaintiffs. *See* Comment, *Requiem for the Federal Common Law of Nuisance*, 11 ENVIR.L.REP. 10,191 (1981) ("The roots of the federal common law of nuisance reach back to the first decade of this century, when the Supreme Court for the first time acknowledged the jurisdiction of the federal courts to entertain cases brought by the States to abate pollution that has migrated across state lines . . . on the basis of rules borrowed from water apportionment cases and 'principles of federalism.'"); *cf*. In re

"Agent Orange" Product Liability Litigation, 635 F.2d 987 (2d Cir. 1980), cert. denied sub nom. Chapman v. Dow Chemical Co., No. 80-1882 (Dec. 14, 1981) (No federal common law tort liability for suppliers of "Agent Orange"). Milwaukee v. Illinois and Michigan held in 1981 that Congress' "establishment of a comprehensive regulatory program supervised by an expert administrative agency" supplanted the possibility of a federal common law available to State plaintiffs in water pollution cases. 451 U.S. at 317. Middlesex County Sewerage Authority v. National Sea Clammers Association therefore held that it was moot "whether [a] federal common law of nuisance could ever be the basis for a suit for damages by a private party." 453 U.S. at 11n.17. The lower courts have applied this rationale to hazardous waste cases, where RCRA and CERCLA provide the comprehensive statutory scheme which has supplanted any possible federal common law. United States v. Price, 523 F.Supp. 1055, 1069 (D.N.J. 1981) ("The comprehensive nature of the schemes established by the RCRA and the CERCLA require us to conclude that, if federal common law ever governed this type of activity, it has since been preempted by those statutes."); United States v. Kin-Buc, Inc., 532 F.Supp. 699 (D.N.J. 1981).

44. See Freeman letter to Grad, dated December 16, 1981, and Freeman letter to Superfund 301(e) Study Group dated May 17, 1982, [with enclosure]. See also Comment, The Supreme Court Closes the Door on Implied Causes of Action Under Environmental Statutes: Middlesex County Sewerage Authority v. National Sea Clammers 1 VA. J. NAT. RESOURCES L. 304, 326-327 (1981); Casenote, Middlesex County Sewerage Authority v. National Sea Clammers Association: Implied Private Rights of Action for Damages Under the Federal Water Pollution Control Act Amendments of 1972, 12 ENVIR.L. 197, 223-224 (1981); cf. S.Rep. No. 97-284, 97th Cong., 1st Sess. 164-165 (1981) (regulatory reform act).

45. See 127 Cong. Rec. S.12249 (daily ed. Oct. 27, 1981) ("technical" amendment to Clean Water Act in S.1716); H.R. Rep. No. 97-570, 97th Cong., 1st Sess. 21-22 (1982) (H.R. 6307, § 10).

46. 523 F.Supp. 1055 (D.N.J. 1981).

47. E.g., Consumer Product Safety Commission v. GTE Sylvania, 447 U.S. 102, 118 (1980) (post hoc statement by conference committee entitled to little weight);

Waterman S.S. Corp. v. United States, 381 U.S. 252, 268-269 (1965) (legislative history of act passed long after another act does not afford any aid in interpreting earlier statute); Davies Warehouse Co. v. Bowles, 321 U.S. 144, 156 (1943) (suggesting post-hoc administrative interpretation of statute litigation inspired); Penn. Mut. L. Ins. Co. v. Lederer, 252 U.S. 523, 537 (1920) (no aid in construing an act of Congress can be derived from the legislative history of another passed six years later).

48. Report, at 240-256; Breitel at 9-10; In addition, even in the description of current law in the Report's Part III, time, budgeting and staff constraints obviously prevented the Group from completing the kind of comprehensive and thorough job typical of the Restatements. While the topics that are addressed in Part III of the Report are generally handled adequately, many other important legal matters were not addressed (e.g., issues of contribution and indemnification, methods of apportionment such as comparative fault or comparative causation, legal defenses such as assumption of the risk and contributory negligence, and many insurance issues). More particularly, nothing in the Report should be construed to imply that hazardous waste companies under current law bear (or should bear), individually or collectively, the health or other social consequences of injuries or diseases to the extent those injuries or diseases are caused by others. Furthermore, where a better method of apportionment exists based on evidence in an individual case, joint and several apportionment may be inappropriate even though the burden of establishing the better apportionment method (e.g., comparative fault, comparative contribution) might properly be placed on the liable defendants collectively rather than on the plaintiffs, according to the Study Group majority report. Cf. RESTATEMENT (SECOND) OF TORTS, § 433B(2) (1965) (burden of proof on apportionment); Report, at 69 (California "Superfund" apportionment rules).

49. Schmalz, "Superfunds" and "Tort Law Reforms" -- Are They Insurable? 38 BUS. LAW. (Nov. 1982 forthcoming); see Report, at 167-169; "claims-made" policies are not inconsistent with this approach, as the Report intimates; see Report, at 168, 176n.66. The Post-Closure Liability Trust Fund could be expanded to cover injuries arising out of accidents which occur during the operational life of a facility but which

liability upon producers of products for injuries with which they may have absolutely no connection."); Note, An Efficiency Analysis of Vicarious Liability Under the Law of Agency, 91 YALE L.J. 168, 197-198 (1981) ("If the principal lacked a reasonable monitoring capability . . . [vicarious liability] tends to increase the number of torts, perhaps to the detriment of efficiency, by diluting the agent's incentives for precautionary behavior."); cf. Parnell, Manufacturers of Toxic Substances: Tort Liability and Punitive Damages 17 FORUM 947, 968 (1982) ("Indeed, United States manufacturers' fear of the socialistic welfare state may soon be replaced with a different dread, that of absolute liability for its hazardous waste byproducts."); see also Report, at 124n.74.

53. See H.R. 6159, 97th Cong., 2d Sess. (1982) (Risk Analysis Research and Demonstration Act of 1982); THE RISK ANALYSIS RESEARCH AND DEMONSTRATION ACT OF 1982: HEARING BEFORE THE SUBCOMMITTEE ON SCIENCE, RESEARCH AND TECHNOLOGY OF THE HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY, 97th Cong., 1st Sess. (1981); H.R. 6307, 97th Cong., 2d Sess. (1982) (Resource Conservation and Recovery Act of 1982); H.R. Rep. No. 97-570, 97th Cong., 2d Sess. (1982); H.R. 85, 97th Cong., 1st Sess. (1981) (Comprehensive Oil Pollution Liability and Compensation Act); H.R. Rep. No. 97-120, 97th Cong., 1st Sess. (1981); S.1483, 97th Cong., 1st Sess. (1981) (Radiation Exposure Compensation Act of 1981).

H.R. 5735, 97th Cong., 2d Sess. (1982) (Occupational Health Hazards Act of 1982); S.2847, 96th Cong., 2d Sess. (1980) (Asbestos Health Hazards Act of 1980); H.R. 25, 97th Cong., 1st Sess. (1981) (Longshoremen's Act Amendments); S.1182, 97th Cong. 1st Sess. (1981) (Longshoremen's Act Amendments); cf. D.C. Code 36-301 et seq. (D.C. Workers' Compensation Act of 1979); Postel, The New Act in Town: An Overview of Workers' Compensation in D.C., 6 DISTRICT LAW. 24 (May/June 1982).

H.R. 5261, 97th Cong., 1st Sess. (1981) (Standards for State Product Liability Tort Litigation Act of 1982); S.2631, Product Liability Act, 97th Cong., 2d Sess. (1982) (Senate Committee on Commerce, Science and Transportation); Product Safety: A New Hot Potato for Congress, U.S. NEWS & WORLD REP. 62 (Jun. 14, 1982); Shea, Product Liability: A Continuing Process of Change, 68 ABA J. 576 (1982).

H.R. 1027, 97th Cong., 1st Sess. (1981) (bill to establish a federal cause of action for and federal court procedures with respect to aviation activity).

APPENDIX

Subsection of Statute	Initial Proof Required	What is Established by the Presumption	1981 Legislative Action*
§ 411(c)(1) 30 U.S.C.A. § 921(c)(1)	10 years exposure and evidence of pneumoconiosis	the pneumoconiosis arose out of the claimant's employment	
§ 411(c)(2) 30 U.S.C.A. § 921(c)(2)	10 years exposure and death from a respirable disease	death was due to pneumoconiosis	eliminated
§ 411(c)(3) 30 U.S.C.A. § 921(c)(3)	chest roentgenogram or biopsy showing large opacities or massive lesions in the lung (i.e., evidence of "complicated" pneumoconiosis)	that total disability or death was due to pneumoconiosis	
§ 411(c)(4) 30 U.S.C.A. § 921(c)(4)	15 years exposure and medical evidence of total disabling respiratory or pulmonary impairment	that total disability or death was due to pneumoconiosis	eliminated
§ 411(c)(5) 30 U.S.C.A. § 921(c)(5)	25 years exposure prior to 1971 and death prior to 1978	survivors entitled to benefits	eliminated

*See 127 Cong. Rec. S 15480 (Dec. 16, 1981).

July 22, 1982

FINAL COMMENTS BY WEYMAN I. LUNDQUIST

Study Group Member

I endorse the report. It is not perfect. It does not reflect the totality of my views. It is a major step in an appropriate direction. Because the report is essentially a consensus product, I question the need for individual comments, as they detract from the report as a whole. Be that as it may, the judicial affection for majority, separate, concurring, minority, or dissenting views is contagious. The lawyers of this committee have caught the disease, myself included. Again, individual comments should not undermine the consensus reflected in the work of this committee.

The constituency of the committee is diverse. The views of its members are substantively different in approach and philosophy. Thus, it is remarkable that this group could achieve the unanimity of agreement it did in recommending compensation mechanisms for the still unquantified problem of injury and harm from toxic wastes. The one specific report proposal I will address is the Tier One-Tier Two election process. While I favor the report proposal, I could comfortably join with the Anderson, Breitel, Freeman, O'Connell position should Congress deem it advisable. I now address our work from a different perspective.

We have learned several lessons from the work and study of the committee. Among them is that problems of latent origination require non-traditional solutions. No present day economic analysis, no cost internalization, no creation of forums, no present medical knowledge, can appropriately deal with problems which should have been dealt with in decades past.

The significant lesson learned from this is that future emphasis--economic, legislative, legal -- should focus on avoiding toxic injury problems, not creating compensation mechanisms for them. Today and tomorrow's efforts and legislation should concentrate on having generators of hazardous waste develop ways to make them benign. Emphasis should be on the treatment of waste materials to make them safe, rather than on storage of the dangerous materials or treatment and compensation for those afflicted.

It is not farsighted to justify current industrial activity on the grounds that economic pressures at home or from abroad mandate that we permit today what we can anticipate will be a greater problem tomorrow. While it is true, as noted by individual committee commentators, that our economy has produced affluence and benefits beyond those of the "pristine jungle," it is equally true that all approaches which have taken us from the "pristine jungle" are not those which will continue to benefit us in the future. It would be nice if one could anticipate that free-market economic forces, left unfettered, would lead to the goals we seek. That has not happened. It is unlikely to happen when short-term gain conflicts with long-term problems and costs. It is difficult to ask that we act now to protect future generations. It is however both wiser and kinder to do this than for us to ask those yet unborn to pay for what we enjoy. I suggest our historic experience with future fixes is not good (witness developing latent toxic disease problems). I do not blame those who were unaware they were creating future problems. I suggest that civilized prudence calls for a more conservative approach today. One example: Who today will vouch for our ability to contain, to cure diseases developed from or even to pay for the secure storage of harmful toxic substances with lives of 20-50 or a 1000 years?

The committee's recommendations provide for compensation remedies for damages. Preventing harm to individuals and their environment is a far better approach than after the fact compensation for injury or harm. The very need for this committee's study arises from the fact that past unconsidered conduct has given rise to substantial present harm which we must now seek to redress with dollars as the best available substitute for health or damage to property.

Unless we live within the capabilities of our resources and knowledge, we are putting at risk the futures of others. One of the sound tenets of our economic system has been that one saves now to invest for the future, for oneself and others. Unless we adopt this prudence in our approach to toxic substance injury and damage, we run the risk of bankrupting the lives and futures of others.

COMMENTS BY JEFFREY O'CONNELL, STUDY GROUP MEMBER

Like my colleagues I make a separate statement reluctantly. The reporter and his staff have labored mightily and well against formidable odds. Had my colleagues been content to confine themselves to the separate statement issued by Messrs. Breitel, Anderson, Freeman, et al., I would have joined them in doing so. But in light of the (very understandable) urge of others to expand on their reservations about the report, I join them, lest it be thought I have none.

Extreme pressures of time, understandably imposed by the Study Group on separate comments by members, coupled with conflicting commitments within this narrow time frame, preclude extensive comment by me. So I limit myself to a few fundamental points:

1. The report allows payments under Tier 1 to be made regardless of whether private health insurance, sick leave, disability insurance, etc., have already been paid. Report, Fifth Recommendation. This means that Tier 1 payments will result in either a windfall of multiple payments to claimants for the same loss or subrogation by the claimant's first-party insurer(s) or other collateral sources. At this (or any) state of our economy, to propose such a new, revolutionary, and comparatively generous source of social insurance payment to victims of toxic wastes as is proposed for Tier 1, and yet at the same time to burden it with repaying amounts already paid by other sources of insurance, strikes me as very unwise. Such a new and expensive social insurance scheme should be used to pay only for losses not already covered by other sources. Nor need we fear any significant deleterious effects in lack of deterrence in the resulting externalities given (a) the tremendous difficulties

in calculating appropriate degrees of internalization, and (b) the tremendous burdens which the new Tier 1 remedy, limited to even excess insurance, should mean for American industry. For more of my views on all this in related but different contexts, see O'Connell, A Proposal to Abolish Contributory and Comparative Fault with Compensatory Savings by Also Abolishing the Collateral Source Rule, 1979 U. Ill. L. F. 591, 600-06; (hereafter cited as Collateral Source); A Proposal to Abolish Defendants' Payment for Pain and Suffering in Return for Payment of Claimants' Attorneys Fees, 1981 U. Ill. L. Rev. 333, 353-55 (hereafter cited as Pain and Suffering); Ending Insult to Injury 145-47 (1975). Thus I would urge that any Tier 1 payments be in excess to all collateral sources--public and private. Id.

2. The report's further indifference to waste in the legal process is indicated by the number of proceedings it authorizes for harm from toxic wastes. There will be (1) a Tier 1 proceeding (with the possible ultimate respondent-payer--whether generator, transporter, or disposer--notified of the Tier 1 proceedings so that such respondents will be inclined to attend, even if not allowed to participate, in order to prepare for possible subrogation or tort proceedings, with all the costs of thus attending the Tier 1 proceedings); (2) a subrogation proceeding by the Tier 1 source of payment against any likely respondent; and (3) a Tier 2 proceeding in tort between an alleged victim and any likely respondent. So we will have three (count'em!), three possible legal proceedings arising from the same incident. And that does not take into account the possible appeals at each stage, nor the additional appeals stemming from federal-state interaction. Report, Eigth Recommendation. With all due respect to my fellow committee members, only a committee of lawyers would invent such a complex structure of multiple legal

proceedings.

How could the above difficulties be avoided?

3. If a no-fault administrative remedy for injuries from toxic wastes is feasible (and as to that see below), it should be (a) in excess of all other insurance, public and private (perhaps including even life insurance, see O'Connell, Collateral Source, 1979 U. Ill. L. F. at 602), and (b) a sole remedy, with a possible exception for tort actions in extreme cases. O'Connell, Pain and Suffering 1981 U. Ill. L. Rev. at 350-51, 360-62. To propose in our current (or any) economic clime that those generating or disposing of toxic wastes pay no-fault benefits, plus remaining fully liable in tort (with only a subtraction of no-fault benefits from tort liability), strikes me once again as very unwise. Would anyone--except plaintiffs' personal injury lawyers--propose that employers be fully exposed in every case to both workers' compensation and common law liability? That workers compensation benefits are now occasionally supplemented by third-party tort actions is itself extremely unwise. O'Connell, An Immediate Solution to Some Products Liability Problems: Workers' Compensation as a Sole Remedy for Employees, with an Employers' Remedy Against Third-Parties, 1976 Ins. L. J. 63; Bargaining for Waivers of Third-Party Tort Claims: An Answer to Product Liability Woes for Employers and Their Employees and Suppliers, 1976 U. Ill. L. F. 435-41; The Lawsuit Lottery: Only The Lawyers Win 216-17 (1979). Far better to make social insurance benefits truly adequate than to supplement a relatively few beneficiaries with the lottery of tort litigation Id. Note that the report goes further than the workers' compensation situation in that every respondent for toxic liability faces the possibility of Tier 1 plus Tier 2 liability. That add-on

laws (simply adding on no-fault remedies to existing tort rights with no limitations on the right to sue in tort except for a deduction of the no-fault benefits in the tort action) are overly expensive and unworkable has, I submit, been amply demonstrated in the auto insurance field. O'Connell and Beck, An Update of the Surveys on the Operation of No-Fault Auto Law, 1979 Ins. L. J. 129; O'Connell, Operation of No-Fault Auto Laws: A Survey of Surveys, 56 Neb. L. Rev. 23 (1977); J. O'Connell, The Lawsuit Lottery Ch. 8 (1979); Note, No-Fault Automobile Insurance: An Evaluative Survey, 30 Rutgers L. Rev. 909 (1977).

Nor are the so-called "exit tolls" proposed in the report (Report, First Recommendation), whereby a claimant pursuing both Tier 1 and Tier 2 remedies may be subject to an assessment of costs upon an unsuccessful (as well as relatively unsuccessful) pursuit of Tier 2 remedy, likely to be effective, given the unlikelihood of insurers or defendants pursuing the typical unsuccessful tort claimant to recover financial penalties.

The problems of an add-on remedy would be alleviated considerably by the proposal contained in a separate statement by members Breitel, Anderson, Freeman, et al. Under that proposal, in return for expanding Tier 1 benefits to include some compensation for psychic loss, unless it would be, say, unconscionable for a claimant to be confined to a Tier 1 remedy, no pursuit of both Tier 1 and 2 would be allowed. For one genesis of this criterion based on unconscionability, see O'Connell, Offers That Can't Be Refused, forthcoming in Nw. L. Rev. (1982). To get the flavor of a proposal for scheduled compensation for psychic loss, see the Australian proposal, making use of objective criteria formulated by the American Medical Association, set forth in Palmer, Accidents, Sickness and Compensation in J. O'Connell & R. Henderson

Tort Law, No-Fault & Beyond 696, 704-10 (1975).

It may unfortunately be the case that the problems of causation in toxic torts are too intractable to make for easily defined no-fault insured events, such that the definition of liability cannot be readily formed, even with carefully drafted presumptions. Certainly the difficulties in the most closely analagous area--that applying workers' compensation with its no-fault premise to industrial *diseases*--give one pause. In light of those difficulties, I have elsewhere suggested a half-way house between genuine no-fault and the egregious inefficiencies of fault liability: A statute under which any defendant against any claim for personal injury caused by toxic wastes (as well as other personal injury claims) be given the option of foreclosing any such claim, by offering within six months of the claim to pay claimant's net economic loss, consisting mostly of medical expense and wage loss beyond any collateral source already available to the claimant. Thus, defendants could limit payments to claimants' out-of-pocket losses unless such a limitation of liability would be deemed unconscionable. To create incentives for this system, if the defendant refuses such payment the burden of proof as to lack of liability could be shifted to the defendant, with the case placed on an expedited trial calendar (at the claimant's option) and with consideration of claimant's fault (including contributory or comparative negligence, assumption of risk) deemed irrelevant to defendant's liability. For more on this proposal, see O'Connell, *Foreclosing Claims for Personal Injury from Toxic Substances by Defendant's Tender of Claimant's Net Economic Losses*, forthcoming in Va. J. of Natural Resources L. (1982); *Offers That Can't Be Refused: Foreclosure of Personal Injury Claims by Defendants' Tender of*

Claimant's Net Economic Losses, forthcoming in Nw. L. Rev. (1982).

But in closing, let me say that, on balance, I praise the report. It recognizes the crucial issue--the need for an improved remedy compared to the common law claim, calling for simplified criteria and lesser payment. And it struggles to recognize--however inadequately--that such a no-fault remedy for less payment cannot simply be added on to common law liability with little or no barrier between pursuit of both fault and no-fault claims. Bravo for that, say I.

COMMENTS OF

WARREN SPANNAUS

Following the completion of the report, committee members led by Messrs. Anderson and Breitel developed an alternative to the "exit barrier" approach proposed in the recommendations. The general nature of the alternative which (1) requires judicial approval to pursue a tier two (common law) action following a prior election of a tier one (administrative) remedy, (2) broadens the benefits available to claimants and (3) may reduce reliance on tier two actions, was discussed at the committee's last meeting. However, the proposal was not developed in sufficient detail at that time. As a result I supported the exit barrier recommended in the report. Although I still support the exit barrier approach, the Anderson-Breitel proposal as more fully explained in their comments is also worthy of consideration by Congress.